

gtggagaacg gctctgcggt gtgtgtgtgc caggccggat acaccggagc agcctgcgag  
 960  
 atggatgtgg acgactgcag ccctgacccc tgctgaatg gaggtctctg tgttgacctg  
 1020  
 gtggggaatt acacctgctt gtgtgccgag cccttcaagg gacttcgctg tgagacagga  
 1080  
 gaccatccag tgccacacgc ctgcctctcg gcccttgcc acaatggggg cacctgtgtg  
 1140  
 gatgcggacc agggctacgt gtgcgagtgc cccgaaggct tcatgggcct ggactgcagg  
 1200  
 gagagagtcn ncccgatgac tgtgagtgc gcaacggagg cagatgectg ggcgccaaca  
 1260  
 ccacctctg cccatgcccc ctgcggannt tctttgggct tctctgtgaa tttgaaatca  
 1320  
 cagccantgc cctgcaacat gaacacacag tgcccagatg ggggctactg catggagcac  
 1380  
 ggcgggagct acctctgctt ctgccacacc gaccacaatg ccagccactc cctgccatca  
 1440  
 ccctgcgact cggacccctg cttcaacgga ggctcctgag atgcccata gaactcctac  
 1500  
 acctgcgagt gcccgcgagg gttccacggc aagcactgag agaaagccc ggcacacctg  
 1560  
 tgcagctcag ggccctgccg gaacgggggc acgtgcaagg aggcgggagg cgagtaccac  
 1620  
 tgcagctgcc cctaccgctt cactgggagg cactgtgaga tcgggaagcc agactcgtgt  
 1680  
 gcctctggcc cctgtcaca cggcggcacc tgcttcact acattggcaa atacaagtgt  
 1740  
 gactgtcccc caggcttctc cggcgggcac tgcgagatag cccctcccc ctgcttccgg  
 1800  
 agcccgtgtg tgaatggggg cacctgcgag gaccgggaca cggatttctt ctgccactgc  
 1860  
 caagcagggt acatgggagc ccgatgccag gcagaggtgg actgcggccc cccggaggag  
 1920  
 gtgaagcacg ccacactgag cttcaacggc acgcggtgag gcgcgggtgg cctgtatgca  
 1980  
 tgtgacctg gctacagcct gagcgcccc agcgcacatc gggcttgcca gccacacggt  
 2040  
 gtctggagt agcctcccca gtgccttggg gattctgtgg gcc  
 2084

&lt;210&gt; 5328

&lt;211&gt; 694

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5328

Glu	His	Ser	Gly	Leu	Tyr	Val	Asn	Asn	Asn	Gly	Ile	Ile	Ser	Phe	Leu
1				5					10					15	
Lys	Glu	Val	Ser	Gln	Phe	Thr	Pro	Val	Ala	Phe	Pro	Ile	Ala	Lys	Asp
			20					25					30		
Arg	Cys	Val	Val	Ala	Ala	Phe	Trp	Ala	Asp	Val	Asp	Asn	Arg	Arg	Ala
		35					40				45				
Gly	Asp	Val	Tyr	Tyr	Arg	Glu	Ala	Thr	Asp	Pro	Ala	Met	Leu	Arg	Arg

50	55	60
Ala Thr Glu Asp Val Arg His Tyr Phe Pro Glu Leu Leu Asp Phe Asn		
65	70	75
Ala Thr Trp Val Phe Val Ala Thr Trp Tyr Arg Val Thr Phe Phe Gly		80
	85	90
Gly Ser Ser Ser Ser Pro Val Asn Thr Phe Gln Thr Val Leu Ile Thr		95
	100	105
Asp Gly Lys Leu Ser Phe Thr Ile Phe Asn Tyr Glu Ser Ile Val Trp		110
	115	120
Thr Thr Gly Thr His Ala Ser Ser Gly Gly Asn Ala Thr Gly Leu Gly		125
	130	135
Gly Ile Ala Ala Gln Ala Gly Phe Asn Ala Gly Asp Gly Gln Arg Tyr		140
145	150	155
Phe Ser Ile Pro Gly Ser Arg Thr Ala Asp Met Ala Glu Val Glu Thr		160
	165	170
Thr Thr Asn Val Gly Val Pro Gly Arg Trp Ala Phe Arg Ile Asp Asp		175
	180	185
Ala Gln Val Arg Val Gly Gly Cys Gly His Thr Thr Ser Val Cys Leu		190
	195	200
Ala Leu Arg Pro Cys Leu Asn Gly Gly Lys Cys Ile Asp Asp Cys Val		205
210	215	220
Thr Gly Asn Pro Ser Tyr Thr Cys Ser Cys Leu Ser Gly Phe Thr Gly		225
225	230	235
Arg Arg Cys His Leu Asp Val Asn Glu Cys Ala Ser Gln Pro Cys Gln		240
	245	250
Asn Gly Gly Thr Cys Thr His Gly Ile Asn Ser Phe Arg Cys Gln Cys		255
	260	265
Pro Ala Gly Phe Gly Gly Pro Thr Cys Glu Thr Ala Gln Ser Pro Cys		270
	275	280
Asp Thr Lys Glu Cys Gln His Gly Gly Gln Cys Gln Val Glu Asn Gly		285
290	295	300
Ser Ala Val Cys Val Cys Gln Ala Gly Tyr Thr Gly Ala Ala Cys Glu		305
305	310	315
Met Asp Val Asp Asp Cys Ser Pro Asp Pro Cys Leu Asn Gly Gly Ser		320
	325	330
Cys Val Asp Leu Val Gly Asn Tyr Thr Cys Leu Cys Ala Glu Pro Phe		335
	340	345
Lys Gly Leu Arg Cys Glu Thr Gly Asp His Pro Val Pro His Ala Cys		350
	355	360
Leu Ser Ala Pro Cys His Asn Gly Gly Thr Cys Val Asp Ala Asp Gln		365
370	375	380
Gly Tyr Val Cys Glu Cys Pro Glu Gly Phe Met Gly Leu Asp Cys Arg		385
385	390	395
Glu Arg Val Xaa Pro Met Thr Val Ser Ala Ala Thr Glu Ala Asp Ala		400
	405	410
Trp Ala Pro Thr Pro Pro Ser Ala His Ala Pro Cys Gly Xaa Ser Leu		415
	420	425
Gly Phe Ser Val Asn Leu Lys Ser Gln Pro Xaa Pro Cys Asn Met Asn		430
	435	440
Thr Gln Cys Pro Asp Gly Gly Tyr Cys Met Glu His Gly Gly Ser Tyr		445
450	455	460
Leu Cys Val Cys His Thr Asp His Asn Ala Ser His Ser Leu Pro Ser		465
465	470	475
Pro Cys Asp Ser Asp Pro Cys Phe Asn Gly Gly Ser Cys Asp Ala His		480



				485					490					495
Asp	Asp	Ser	Tyr	Thr	Cys	Glu	Cys	Pro	Arg	Gly	Phe	His	Gly	Lys
			500					505					510	
Cys	Glu	Lys	Ala	Arg	Pro	His	Leu	Cys	Ser	Ser	Gly	Pro	Cys	Arg
		515					520				525			Asn
Gly	Gly	Thr	Cys	Lys	Glu	Ala	Gly	Gly	Glu	Tyr	His	Cys	Ser	Cys
		530				535					540			Pro
Tyr	Arg	Phe	Thr	Gly	Arg	His	Cys	Glu	Ile	Gly	Lys	Pro	Asp	Ser
545					550					555				560
Ala	Ser	Gly	Pro	Cys	His	Asn	Gly	Gly	Thr	Cys	Phe	His	Tyr	Ile
				565					570					575
Lys	Tyr	Lys	Cys	Asp	Cys	Pro	Pro	Gly	Phe	Ser	Gly	Arg	His	Cys
			580					585					590	Glu
Ile	Ala	Pro	Ser	Pro	Cys	Phe	Arg	Ser	Pro	Cys	Val	Asn	Gly	Gly
		595					600					605		Thr
Cys	Glu	Asp	Arg	Asp	Thr	Asp	Phe	Phe	Cys	His	Cys	Gln	Ala	Gly
		610				615					620			Tyr
Met	Gly	Arg	Arg	Cys	Gln	Ala	Glu	Val	Asp	Cys	Gly	Pro	Pro	Glu
625					630					635				640
Val	Lys	His	Ala	Thr	Leu	Arg	Phe	Asn	Gly	Thr	Arg	Leu	Gly	Ala
				645					650					655
Ala	Leu	Tyr	Ala	Cys	Asp	Arg	Gly	Tyr	Ser	Leu	Ser	Ala	Pro	Ser
			660				665					670		Arg
Ile	Arg	Val	Cys	Gln	Pro	His	Gly	Val	Trp	Ser	Glu	Pro	Pro	Gln
		675					680					685		Cys
Leu	Gly	Asp	Ser	Val	Gly									
														690

&lt;210&gt; 5329

&lt;211&gt; 2582

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5329

nnngggccgcga acgtgtcgag agccgtaagt aaagtgtcgc aaagcagaag gaaggcggga  
60

gtccccgactg caaacattga ggaaagccag gcagtagagg ccgctatggc gaacgttccg  
120

tgggcagagg tctgcgagaa attccaggcg gcgctcgctc tgtcgcggtt ggaactgcat  
180

aaaaatccgg agaaggaacc atacaagtcc aaatacagcg cccgggcgct actggaagag  
240

gtcaaggcgc tgctcggccc tgcgcctgag gacgaggatg agcggcctga ggccgaggac  
300

ggccccgggtg ccggtgacca cgccctgggg ctgccggctg aggtggtgga gcccgagggg  
360

cccgtcggcc agcgagcggg gaggctggca gtcacgagt tccacctcgg ggtgaaccac  
420

atcgacacgg aggagctgtc ggccggggag gagcacctgg tgaaatgcct gcggctgctg  
480

cgcaggtacc ggctctcgca cgactgcac tctctctgca tccaggcgca gaataacctg  
540

ggtatcttgt ggtctgaaag agaagaaatt gaaactgcac aggcttacct agagtcacac  
600

gaagcactat ataatcagta tatgaaagag gttgggagtc ctctctcttga tctactgag  
660  
cgttttcttc ctgaagaaga gaaacttact gaacaagaga gatcaaaaag atttgaaaag  
720  
gtttatactc ataacctata ttacctagct caagtctacc agcatctgga aatgtttgag  
780  
aaggctgctc actattgcca tagtacacta aaacgccagc ttgagcacia tgcctaccat  
840  
cctatagagt gggctatcaa tgctgctacc ttgtcacagt ttacatcaa taagctatgc  
900  
tttatggagg ccaggcactg tttatcagct gctaattgca tttttggtca aactggaaaag  
960  
atctcagcca cagaagacac tctgaagct gaaggagaag tgccagagct ttatcatcaa  
1020  
agaaaggggg aaatagcaag gtgctggatc aaatactgtt tgactctcat gcagaatgcc  
1080  
caactctcca tgcaggacaa cataggagag cttgatcttg ataaacagtc tgaacttaga  
1140  
gctttaagga aaaaagaact agatgaggag gaaagcattc ggaaaaaagc tgtgcagttt  
1200  
ggaaccggtg aactgtgtga tgccatctct gcagtagaag agaaagtgag ctacttgaga  
1260  
cctttagatt ttgaagaagc cagagaactt ttcttattgg gtcagcacta tgtctttgag  
1320  
gcaaaagagt tctttcagat tgatgggttat gtcactgacc atattgaagt tgtccaagac  
1380  
cacagtgtc tgtttaaggt gcttgcatc tttgaaactg acatggagag acggtgcaag  
1440  
atgcataaac gcagaatagc catgctagag cccctaactg tagacctgaa tccacagtat  
1500  
tatctgttgg tcaacagaca gatccagttt gaaattgcac atgcttacta tgatatgatg  
1560  
gatttgaagg ttgccattgc tgacaggcta agggaccccg actcacacat tgtaaaaaaa  
1620  
ataaataatc ttaataagtc ggcactcaag tactaccagc tcttcttaga ctccctgaga  
1680  
gaccaaaca aagtctttcc tgagcacatc ggggaagacg tctccgccc ggccatgtta  
1740  
gctaaattcc gggtagctcg tctgtatggc aaaatcatta ctgcagatcc caagaaagag  
1800  
ctggaaaatt tggcaacatc attggaacat tacaatttta ttgttgatta ctgtgaaaaa  
1860  
catcctgagg ccgccagga aatagaagtt gagctagaac ttagtaaaga gatggtagt  
1920  
cttctcccaa caaaaatgga gagattcaga accaagatgg cctgactta atccttgttt  
1980  
ttaaagaaag gaaatgtgca atattgaagt gatcttttcc cctagtcaga caggcccaat  
2040  
tccattgtga tgtttacctt tatagccagg tgagtgcagt ttgaacttga gatacagtca  
2100  
actgagtgtt tgctaggatc ctaaggaaca taaagttaat taaaaactta cacctaatta  
2160  
tgtaaatgac cttgttaaag acatgtgatt tgtattttag atgcttggtt cctattaaaa  
2220

tacagacatt tctaccctca gtttctaaat gtagactatt tgttggttag tacttgatag  
2280  
attccttgta agaaaaaatg ctgggtaatg tacctggtaa caagcctggt aatatattaa  
2340  
gattgaaaaa gtaacttcta tagttactcc ttctaaaata tttgacttcc tacattcccc  
2400  
ccacccaaaa tctttccctt ttgaaaatac taaaaactaa gttatgttat tataaagtgt  
2460  
aaaatgggtt gtcttaatta taggagaaaa aggccttggt agaaataaaa taaactgact  
2520  
tatttcacta atgaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa  
2580  
aa  
2582

&lt;210&gt; 5330

&lt;211&gt; 308

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5330

Trp	Ile	Lys	Tyr	Cys	Leu	Thr	Leu	Met	Gln	Asn	Ala	Gln	Leu	Ser	Met
1				5				10						15	
Gln	Asp	Asn	Ile	Gly	Glu	Leu	Asp	Leu	Asp	Lys	Gln	Ser	Glu	Leu	Arg
		20					25						30		
Ala	Leu	Arg	Lys	Lys	Glu	Leu	Asp	Glu	Glu	Glu	Ser	Ile	Arg	Lys	Lys
		35					40					45			
Ala	Val	Gln	Phe	Gly	Thr	Gly	Glu	Leu	Cys	Asp	Ala	Ile	Ser	Ala	Val
	50					55				60					
Glu	Glu	Lys	Val	Ser	Tyr	Leu	Arg	Pro	Leu	Asp	Phe	Glu	Glu	Ala	Arg
65					70				75					80	
Glu	Leu	Phe	Leu	Leu	Gly	Gln	His	Tyr	Val	Phe	Glu	Ala	Lys	Glu	Phe
			85					90						95	
Phe	Gln	Ile	Asp	Gly	Tyr	Val	Thr	Asp	His	Ile	Glu	Val	Val	Gln	Asp
		100					105						110		
His	Ser	Ala	Leu	Phe	Lys	Val	Leu	Ala	Phe	Phe	Glu	Thr	Asp	Met	Glu
		115				120							125		
Arg	Arg	Cys	Lys	Met	His	Lys	Arg	Arg	Ile	Ala	Met	Leu	Glu	Pro	Leu
	130					135					140				
Thr	Val	Asp	Leu	Asn	Pro	Gln	Tyr	Tyr	Leu	Leu	Val	Asn	Arg	Gln	Ile
145				150					155					160	
Gln	Phe	Glu	Ile	Ala	His	Ala	Tyr	Tyr	Asp	Met	Met	Asp	Leu	Lys	Val
			165					170						175	
Ala	Ile	Ala	Asp	Arg	Leu	Arg	Asp	Pro	Asp	Ser	His	Ile	Val	Lys	Lys
		180					185						190		
Ile	Asn	Asn	Leu	Asn	Lys	Ser	Ala	Leu	Lys	Tyr	Tyr	Gln	Leu	Phe	Leu
	195					200						205			
Asp	Ser	Leu	Arg	Asp	Pro	Asn	Lys	Val	Phe	Pro	Glu	His	Ile	Gly	Glu
	210					215					220				
Asp	Val	Leu	Arg	Pro	Ala	Met	Leu	Ala	Lys	Phe	Arg	Val	Ala	Arg	Leu
225				230					235					240	
Tyr	Gly	Lys	Ile	Ile	Thr	Ala	Asp	Pro	Lys	Lys	Glu	Leu	Glu	Asn	Leu
			245					250						255	
Ala	Thr	Ser	Leu	Glu	His	Tyr	Lys	Phe	Ile	Val	Asp	Tyr	Cys	Glu	Lys

	260		265		270										
His	Pro	Glu	Ala	Ala	Gln	Glu	Ile	Glu	Val	Glu	Leu	Glu	Leu	Ser	Lys
	275				280						285				
Glu	Met	Val	Ser	Leu	Leu	Pro	Thr	Lys	Met	Glu	Arg	Phe	Arg	Thr	Lys
	290				295						300				
Met	Ala	Leu	Thr												
305															

<210> 5331  
 <211> 1069  
 <212> DNA  
 <213> Homo sapiens

<400> 5331  
 aaatttgac tagagtatcg cacaaccagg gaaagggttt tgcagcagaa acagaaacgg  
 60  
 gcccaaccaca gagagagaaa taagaccaga gggaagatga tcaccgattc tggcaagtcc  
 120  
 tccggcagtt ctccggcgcc cccaagccag ccgcagggtc tgagctatgc gngaggacgc  
 180  
 ggctgagcac gagaacatga aggctgtgct gaaaacctcg tccccctccg tggaggacgc  
 240  
 cacccccgcg ctgggcgtcc gcacacgcag ccgagcaagc cgnnaggatc cactagttcc  
 300  
 tggactatgg gaactgatga ctgcaccaat gtcacagatg atgcagctga tgagatcatg  
 360  
 gaccgcacgc tcaagtcagc cacccaagtg ccagtcagc gagggtgccc gagggagagg  
 420  
 aaacgatccc gggccaaccg gaaatctttg cgaagaacct tgaagagcgg cctgacccca  
 480  
 gaagaagcca gagccctggg cttggttggc acctcggagt tgcagctgtg acactcatag  
 540  
 gttactccca ggagtgtgct gaggagaagg caagctcttg ctggatgaaa cccctccagg  
 600  
 tgggggttggg gagacttgat attcacatcc aacagtttga aaagggagag ctcaattccc  
 660  
 agcgtcacc catggttgtg gttgcctgct acgcattgac ttggatctcc aggagtcccc  
 720  
 tgcacatacc ttctccatcg tgtcagctgt gtttctcttg attccgtgac acccggttta  
 780  
 ttagttcaaa agtgtgacac cttttctggg caaggaacag cccctttaag gagcaaatca  
 840  
 cttctgtcac agttattatg gtaatatgag gcaatctgat tagcttcaca gactgagctt  
 900  
 ccacaacacc aaaatatcca gatgtaaacc ccaaacttgt acacaaaaga aagcacagat  
 960  
 tgtttacctg ttgtggattt tagatgtaac aaatgtttat acaaatacat acatgtacac  
 1020  
 catgtttcaa atactaaata aatagagttt aatgccaaaa aaaaaaaaaa  
 1069

<210> 5332  
 <211> 61  
 <212> PRT

<213> Homo sapiens

<400> 5332

Lys	Phe	Ala	Leu	Glu	Tyr	Arg	Thr	Thr	Arg	Glu	Arg	Val	Leu	Gln	Gln
1				5					10					15	
Lys	Gln	Lys	Arg	Ala	Asn	His	Arg	Glu	Arg	Asn	Lys	Thr	Arg	Gly	Lys
			20					25					30		
Met	Ile	Thr	Asp	Ser	Gly	Lys	Phe	Ser	Gly	Ser	Ser	Pro	Ala	Pro	Pro
		35					40					45			
Ser	Gln	Pro	Gln	Gly	Leu	Ser	Tyr	Ala	Xaa	Gly	Arg	Gly			
		50				55						60			

<210> 5333

<211> 883

<212> DNA

<213> Homo sapiens

<400> 5333

gagccgccgg gagctgtagt tctccgcgg tccactggaag taggcagaga gcggacctgg  
60  
cggccgggca gcatggcggg gctggagctc ttgtcggacc agggctaccg ggtggacggg  
120  
cggcgcnngc gggagctgcg caagatccag gcgcggatgg gcgtgttcgc gcaggctgac  
180  
ggctcggcct acattgagca gggcaacacc aaggcactgg ctgtggtcta cggcccgac  
240  
gagatccggg gctcccgggc tcgagcctg ccggacaggg ccctagtga ctgtcaatat  
300  
agttcagcga ccttcagcac aggtgagcgc aagcgacggc cacatgggga ccgtaagtcc  
360  
tgtgagatgg gcctgcagct ccgccagact ttcgaagcag ccacccacac acagctgcac  
420  
ccacgctccc agattgatat ctatgtgcag gtgctacagg cagatggtgg gacctatgca  
480  
gcttgtgtga atgcagccac gctggcagtg ctggatgccg ggatacccat gagagacttt  
540  
gtgtgtgctg gctcagctgg ctctgtggac ggcacagccc tggcggacct cagccatgtg  
600  
gaggaagcag ctggtggccc ccagctggcc ctggccctgc tgccagcctc aggacagatt  
660  
gcgctgcttg agatggatgc ccggtgcac gaggaccacc tggagcgggt gttggaggct  
720  
gctgcccagg ctgcccagaga tgtgcacacc ctcttagatc gagtgggtccg gcagcatgtg  
780  
cgtgaggcct ctatcttgcg gggggactga ccaccagcc acccatgtcc agaataaaac  
840  
cctcctctgc ccacaaaaa aaaaaaaaaa aaaaaaaaaa aaa  
883

<210> 5334

<211> 269

<212> PRT

<213> Homo sapiens

&lt;400&gt; 5334

Glu Pro Pro Gly Ala Val Val Leu Pro Arg Ser Leu Glu Val Gly Arg  
 1 5 10 15  
 Glu Arg Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu Leu Ser  
 20 25 30  
 Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Xaa Arg Glu Leu Arg Lys  
 35 40 45  
 Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly Ser Ala Tyr  
 50 55 60  
 Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Val Tyr Gly Pro His  
 65 70 75 80  
 Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg Ala Leu Val  
 85 90 95  
 Asn Cys Gln Tyr Ser Ser Ala Thr Phe Ser Thr Gly Glu Arg Lys Arg  
 100 105 110  
 Arg Pro His Gly Asp Arg Lys Ser Cys Glu Met Gly Leu Gln Leu Arg  
 115 120 125  
 Gln Thr Phe Glu Ala Ala Ile Leu Thr Gln Leu His Pro Arg Ser Gln  
 130 135 140  
 Ile Asp Ile Tyr Val Gln Val Leu Gln Ala Asp Gly Gly Thr Tyr Ala  
 145 150 155 160  
 Ala Cys Val Asn Ala Ala Thr Leu Ala Val Leu Asp Ala Gly Ile Pro  
 165 170 175  
 Met Arg Asp Phe Val Cys Ala Cys Ser Ala Gly Phe Val Asp Gly Thr  
 180 185 190  
 Ala Leu Ala Asp Leu Ser His Val Glu Glu Ala Ala Gly Gly Pro Gln  
 195 200 205  
 Leu Ala Leu Ala Leu Leu Pro Ala Ser Gly Gln Ile Ala Leu Leu Glu  
 210 215 220  
 Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val Leu Glu Ala  
 225 230 235 240  
 Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp Arg Val Val  
 245 250 255  
 Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp  
 260 265

&lt;210&gt; 5335

&lt;211&gt; 4282

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5335

gccggatcgg cggagggggcc gggccaggga gcctcagccc cgccggcagc cctaaggcga  
 60  
 aggtaaccgc cacgggggtcc cgtgcgcgac cccctccctc cggagctcc cgtccccggg  
 120  
 atcccaagct ccgccccgcc gacccccgtc tcccctggac cccggctcta gcctgacgag  
 180  
 atccccaaacc tctgaggtg ctctggcccc ggattctccc gggctgcatt ctctgctct  
 240  
 cctcgctgc gaagcatcac gtccgcttcc cgacgtgag ggcagccccg tccagggcag  
 300  
 tggtctgcc aatgatcctg tgagtattca ggaatcactg ttgccctgg ggatcctgtg  
 360

cctggagtg cccacctgct tgccccagc atggcgctccg acactcccga gtcgctgatg  
420  
gccctctgta ctgacttctg cttgcgcaac ctggatggca ccctgggcta cctgctggac  
480  
aaggagaccc tgcggctaca tccggacatc ttcttgccca gcgagatctg tgaccggctc  
540  
gtcaatgagt atgtggagct ggtgaacgct gcctgtaact tcgagccaca cgagagcttc  
600  
ttcagcctct ttctggaccc ccgcagcacc cgcctcacgc ggatccacct ccgtgaggac  
660  
ctggtgcagg accaggacct ggaggccatc cgcaagcagg acctgggtgga gctgtacctg  
720  
actaactgcg agaagctgtc cgccaagagc ctgcagacac tgaggagctt cagccacacc  
780  
ctggtgtcct tgagcctctt cggctgtaca aacattttct atgaggagga gaaccagggg  
840  
ggctgtgaag atgagtacct cgtcaacccc acctgccagg tgctgggttaa ggatttcacc  
900  
ttcagaggct tcagccgct ccgcttcctc aacttgggccc gcatgattga ttgggtccct  
960  
gtggagtccc tgctgcggcc gcttaactcc ctggctgctt tggacctctc aggcattcag  
1020  
acgagcgacg cagccttctt caccagtggt aaagacagcc tgggtgtcct cgtcctctac  
1080  
aacatggacc tgtccgacga ccacatccgg gtcacgtgc agctgcacaa gctgcgacac  
1140  
ctggacatct cccgagaccg cctctccagc tactacaagt tcaagctgac tcgggaggtg  
1200  
ctgagcctct ttgtgcagaa gctggggaac ctaatgtccc tggacatctc tggccacatg  
1260  
atcttagaga actgcagcat ctccaagatg gaagaggaag cggggcagac cagcattgag  
1320  
ccttccaaga gcagcatcat acctttccgg gctctgaaga ggccgctgca gttcctcggg  
1380  
ctctttgaga actctctgtg ccgcctcacg cacattccag cctacaaagt aagtggtgac  
1440  
aaaaacgaag agcaggtgct gaatgccatc gaggcctaca cggagcaccg gcctgagatc  
1500  
acctcgcggg ccatcaactt gctttttgac atcgcccga tcgagcggtg caaccagctg  
1560  
ctgcccggccc tgaagctggt catcacggcc ctcaagtgcc acaaatatga caggaacatt  
1620  
caagtgcag gcagcgccgc tctcttctac ctaacaaatt ccgagtaccg ctgagagcag  
1680  
agtgtgaagc tgcgcggca ggttatccag gtggtgctga atggcatgga atcctaccag  
1740  
gaggtgacgg tgcagcgaa ctgctgctg acgctctgca acttcagcat ccccgaggag  
1800  
ctggaattcc agtaccgccg ggtcaacgag ctctgtctca gcatcctcaa cccacgcgg  
1860  
caggacgagt ctatccagcg gatcgccgtg cacctgtgca atgcctgggt ctgccaggta  
1920  
gacaacgacc acaaggagcg cgtgggcaag atgggctttg tcgtgacctat gctgaagctg  
1980

attcagaaga agctgctgga caagacatgt gaccagggtca tggagttctc ctggagtgcc  
2040  
ctgtggaaca tcacagatga aactcctgac aactgcgaga tgttctctca tttcaacggc  
2100  
atgaagctct tcctggactg cctgaaggaa ttccagaga agcaggaact gcataggaat  
2160  
atgctaggac ttttggggaa tgtggcagaa gtgaaggagc tgaggcctca actaatgact  
2220  
tcccagttca tcagcgtctt cagcaacctg ttggagagca aggccgatgg gatcgaggtt  
2280  
tcctacaatg cctgcggcgt cctctccac atcatgtttg atggaccga ggccctggggc  
2340  
gtctgtgagc cccagcgtga ggaggtggag gaacgcattg gggctgccat ccagagctgg  
2400  
gacataaact ctggagaaa catcaattac aggtcatttg aaccaattct ccgcctcctt  
2460  
ccccaggaa tetctctgt cagccagcac tgggcaacct gggccctgta taacctcgtg  
2520  
tctgtctacc cggacaagta ctgccctctg ctgatcaaag aaggggggat gcccttctg  
2580  
aggacataa ttaagatggc gaccgcacgg caggagacca aggaaatggc ccgcaagggtg  
2640  
attgagcact gcagtaactt taaagaggag aacatggaca cgtctagata gaggcctccg  
2700  
tccccatggc cgccaccgct ctggaccaca ggcggggagg aagcatgctc aagcagccca  
2760  
gcgggcccgc ccttccgag ggagcctccc acggagtga gagacatggg ggacttttgc  
2820  
acaaccgacg cttttcctta atgttagtga gatatatata tattatatat atatattttt  
2880  
tttttggtta ggaagtgtga agttttgtgt gtatgatttc tgtgcaaaaa caaaagcaac  
2940  
actcctgagt ccttgcagct tccttgcca ttctcaaacc cactcagcct tcctcgtga  
3000  
cacacacact cctaccccaa ccagactaaa tgccataac gctgtgagtg tccagtcctt  
3060  
gtccaggaaa ctcatatccc ggccctggctt cctttcatga gaggagcagg ccttgacag  
3120  
cgtatcgagc atcctgaccc actgcccctg cctgagaacg ccctcttggc tcccgggca  
3180  
agctgatggg gtttgggat tagaacttac cccactgggt ctccaaaag ccttgggtgt  
3240  
cccggctgtg ggccatctgg ggcaggaaag tgagccattc ctaggctgag gtccaggcag  
3300  
ccctgcccct gaagaccctc taggagcagg gcacccagtg gcctgctgc tgtccagcca  
3360  
ggcctgctg aggccacgt gctatggagg ctgctccta gtctccacc aggtcccagg  
3420  
ctgtggaaa cccagccca gggatggtca gaactcgggg gcagattcca ctgccccttc  
3480  
tgccaaacac atccagaacc tgccctcagc cctggaagct agcatcttct ggggcccagg  
3540  
gcttgcttcc tcgtccata gccctcaact gccagggc tcccaccagc agaactgagc  
3600



ctgcctcctc ctcccagcct gccccgctgc ccagaggacc ccacgcctct cagaggcaga  
 3660  
 ggtcccatgc cagcctttga ccacaacgg ccacacagcc gcctccagac cagcactcgg  
 3720  
 actgccctgc agtggccgct tgggctccc tgggggtccc gccctgccct aggcctttacc  
 3780  
 ttggaagcct gagaggcgcc ggctctcttg ctctccatc gatggacact gcattgcttc  
 3840  
 tcatcgga cttgtggagc gcaggggcct ggggagcagc gctaaccctg gaggcagcct  
 3900  
 ttgggtgatg gctttttctt cctttttctt cccgcgggcc tgttttcagg tgttcctagc  
 3960  
 atttctgcct ccaggcagga cggcaggggt gacgagcttt gggagagaca cctggccttt  
 4020  
 ttctcctgga gcctctcctt cccggccctg ggaagtgggc gcagccctgt gttccccag  
 4080  
 cttggcagat gggctgcatg cggcgctccc ttcttccca cgctcagcgg ccccggccag  
 4140  
 accctggcag acttcacacc tcattgcttt accccctggg gcctggggaa atgtctgtac  
 4200  
 tttgggaagt cacagaaata catttttgtg caaatggaa aaaaaaaaaa aaaaaaaaaa  
 4260  
 aaaaaaaaaa aaaaaaaaaa aa  
 4282

&lt;210&gt; 5336

&lt;211&gt; 766

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5336

Met	Ala	Ser	Asp	Thr	Pro	Glu	Ser	Leu	Met	Ala	Leu	Cys	Thr	Asp	Phe
1				5					10					15	
Cys	Leu	Arg	Asn	Leu	Asp	Gly	Thr	Leu	Gly	Tyr	Leu	Leu	Asp	Lys	Glu
			20					25					30		
Thr	Leu	Arg	Leu	His	Pro	Asp	Ile	Phe	Leu	Pro	Ser	Glu	Ile	Cys	Asp
		35				40					45				
Arg	Leu	Val	Asn	Glu	Tyr	Val	Glu	Leu	Val	Asn	Ala	Ala	Cys	Asn	Phe
	50					55				60					
Glu	Pro	His	Glu	Ser	Phe	Phe	Ser	Leu	Phe	Ser	Asp	Pro	Arg	Ser	Thr
65				70				75						80	
Arg	Leu	Thr	Arg	Ile	His	Leu	Arg	Glu	Asp	Leu	Val	Gln	Asp	Gln	Asp
			85					90					95		
Leu	Glu	Ala	Ile	Arg	Lys	Gln	Asp	Leu	Val	Glu	Leu	Tyr	Leu	Thr	Asn
		100					105					110			
Cys	Glu	Lys	Leu	Ser	Ala	Lys	Ser	Leu	Gln	Thr	Leu	Arg	Ser	Phe	Ser
	115					120					125				
His	Thr	Leu	Val	Ser	Leu	Ser	Leu	Phe	Gly	Cys	Thr	Asn	Ile	Phe	Tyr
	130					135				140					
Glu	Glu	Glu	Asn	Pro	Gly	Gly	Cys	Glu	Asp	Glu	Tyr	Leu	Val	Asn	Pro
145				150				155						160	
Thr	Cys	Gln	Val	Leu	Val	Lys	Asp	Phe	Thr	Phe	Glu	Gly	Phe	Ser	Arg
			165					170						175	
Leu	Arg	Phe	Leu	Asn	Leu	Gly	Arg	Met	Ile	Asp	Trp	Val	Pro	Val	Glu

4510

610	615	620
Ala Asp Gly Ile Glu Val Ser Tyr Asn Ala Cys Gly Val Leu Ser His		
625	630	635
Ile Met Phe Asp Gly Pro Glu Ala Trp Gly Val Cys Glu Pro Gln Arg		640
	645	650
Glu Glu Val Glu Glu Arg Met Trp Ala Ala Ile Gln Ser Trp Asp Ile		655
	660	665
Asn Ser Arg Arg Asn Ile Asn Tyr Arg Ser Phe Glu Pro Ile Leu Arg		670
	675	680
Leu Leu Pro Gln Gly Ile Ser Pro Val Ser Gln His Trp Ala Thr Trp		685
	690	695
Ala Leu Tyr Asn Leu Val Ser Val Tyr Pro Asp Lys Tyr Cys Pro Leu		700
705	710	715
Leu Ile Lys Glu Gly Met Pro Leu Leu Arg Asp Ile Ile Lys Met		720
	725	730
Ala Thr Ala Arg Gln Glu Thr Lys Glu Met Ala Arg Lys Val Ile Glu		735
	740	745
His Cys Ser Asn Phe Lys Glu Glu Asn Met Asp Thr Ser Arg		750
	755	760
		765

&lt;210&gt; 5337

&lt;211&gt; 2742

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5337

```

tttttatgga tatttagttt tatttgatac acttggatgc aactttactc attaccattt
60
ttaaaccat gtttaaaagt tttaaaattt gggtagaggc agaaggagaa ggtcgggttg
120
tagaagctgg ggtggccggc agctcgctca tcggtgttcg tgggctttgt cggtcctgac
180
ctcgtctctc tctggaaagg gagggaggct tcgacgtcga gagggagccg ctgccgcgtt
240
agttccgagc ttgaagtcac taggacttct ctcaaacttg tgtgctgagg agactcagat
300
gttggcctca gctcctaggc tgaactcagc agatcgcccc atgaaaactt ctgtattgag
360
acaaaggaag ggatctgtca gaaagcaaca cttgttatct tgggcttggc agcaaggaag
420
aggacaggta gtggagatcc tgcaatctga aaagcagact gaaaggtgac aaagaagctg
480
aagatgggtg gtggagagag gtataacatt ccagccctc aatctagaaa tgttagtaag
540
aaccaacaac agcttaacag acagaagacc aaggaacaga attcccagat gaagattgtt
600
cataagaaaa aagaaagagg acatgggttat aactcatcag cagctgcctg gcaggccatg
660
caaatgggg ggaagaacaa aaattttcca aataatcaaa gtggaattc tagcttatca
720
gtcccagggt tactttttta atctcaagct aatcagaact atgctggtgc caaattagt
780
gagccgccat caccaagtgt ttttccaaa ccaccaagcc actgggtccc tgtttccttt
840

```

aatccttcag ataaggaaat aatgacattt caacttaaaa ccttacttaa agtacaggtg  
900  
taaaataaga caaatgttta aatttagtta tgttcacgga tagttgtcaa ttggtctgaa  
960  
acaaattcgc tagggaatct atttgtgtag aactaattaa tgtaaaaaaa acagaccatc  
1020  
tcgtgttggtg tgcactgtga tataatggta gtatcagtgc aacttaaact aatgattgta  
1080  
cttgatatta agtgtttctca actgagtaac ttttaagtgg aaaccaagtt tagatttggg  
1140  
gagtggtaaa ggaatcagct ttttctattg ttagggaag acagtaattt atcattcatg  
1200  
gaccagtaga ttgttgaaag ttggtgaatc ggattataag cttctagcta acacaaggat  
1260  
tcagaattag gtaaacatct gaaggttttag tatattagaa acacccaaac cagtaatag  
1320  
ctaacctgat gcaactgtga aagaaaatgt gaatttttcg taataattgc attttagtga  
1380  
attgtacagt ggggtggaaag ggcatttggg gctcattaga atgagacata gtacacccca  
1440  
atggccctgt ttattaaatg tagtggatta agtgtctgtc aacaaataca ccaaaccat  
1500  
tttttataga aacagtattt aatggtcact caatagcttt caaaatacat ttttgtatta  
1560  
cagcactgca caagctattc taatagtgtc ctggcctcat cattcctgca aagcttgctt  
1620  
tggggagttg gataatgtga aaattttaag tacctagggg agaaagagcc atgtaaatat  
1680  
ctgtaataaa cttgtagcat atgtaaagtt ttcttggcct ttatcttaca aaaatggagt  
1740  
attttagtat gaatttgctg aatgtaagac cgtggactgt tttttataat atggccta  
1800  
tttaaaggtc caaaataact tgtttttaaa gtttgcctt gtgctaaagt gccagtgtat  
1860  
gtatgttata cttgatttgg ttgtaacta tatttcaaag taaaccctag tgtaataagt  
1920  
tttataacta aaaaggttgc ttcacattca tatcatgtac attaatgtact acataaactt  
1980  
gtcttttagc tatcaatatt taacttgggc agtacttcat cttgatttat ttggagaaat  
2040  
acagcttagg catctgctta cctgcttagg catcaagagg tgccaaatta gaaaataggg  
2100  
cattaacaat caaaattttt aagctgaccc acatacttgc tactggtttc gcttatgttt  
2160  
aagcatttaa agttggcaaa acatgttate aatgtattat gcaagagttt acatcttttg  
2220  
cataagtggc ccattgggtt gcacctaccc cttgaccaa caaaaacaaa acatcactgg  
2280  
caccatactc gaaactacct gtatcctagg ttataagatt gtgaaagcca acaatctata  
2340  
aggttggagg gactctagtt aatctttggg cttagaggag gaaaaaaga tagtccata  
2400  
ctgcatttca catctcttaa aaatagtttt agcagcttaa accttttttag ttataaaact  
2460

tattacacta gggtttactt tgaaatatag tttaacaacca aatcaagtat aacatacata  
 2520  
 cactggcact ttagcacaag ggcaaaacttt aaaaacaagt tattttggac ctttaaaatt  
 2580  
 aggccatatt ataaaaaaca gtccacggtc ttacattcag caaattcata ctaaaatact  
 2640  
 ccatttttgt aagataaagg ccaagaaaac ttacatatg ctacaagttt attacagata  
 2700  
 tttacatggc tctttctccc ctaaggactt aaaattttca ca  
 2742

<210> 5338

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5338

Met	Gly	Gly	Gly	Glu	Arg	Tyr	Asn	Ile	Pro	Ala	Pro	Gln	Ser	Arg	Asn
1				5					10					15	
Val	Ser	Lys	Asn	Gln	Gln	Gln	Leu	Asn	Arg	Gln	Lys	Thr	Lys	Glu	Gln
			20					25					30		
Asn	Ser	Gln	Met	Lys	Ile	Val	His	Lys	Lys	Lys	Glu	Arg	Gly	His	Gly
			35				40					45			
Tyr	Asn	Ser	Ser	Ala	Ala	Ala	Trp	Gln	Ala	Met	Gln	Asn	Gly	Gly	Lys
	50				55					60					
Asn	Lys	Asn	Phe	Pro	Asn	Asn	Gln	Ser	Trp	Asn	Ser	Ser	Leu	Ser	Gly
65					70					75				80	
Pro	Arg	Leu	Leu	Phe	Lys	Ser	Gln	Ala	Asn	Gln	Asn	Tyr	Ala	Gly	Ala
			85						90					95	
Lys	Phe	Ser	Glu	Pro	Pro	Ser	Pro	Ser	Val	Leu	Pro	Lys	Pro	Pro	Ser
			100						105				110		
His	Trp	Val	Pro	Val	Ser	Phe	Asn	Pro	Ser	Asp	Lys	Glu	Ile	Met	Thr
		115					120						125		
Phe	Gln	Leu	Lys	Thr	Leu	Leu	Lys	Val	Gln	Val					
		130					135								

<210> 5339

<211> 847

<212> DNA

<213> Homo sapiens

<400> 5339

nngacacttt gagttactta taatagtgt tactataaga tataaagcag tcataattac  
 60  
 ctaagcttca aaaatctttt gtttccatgt ccagagacaa gtacagtaca gtattcttat  
 120  
 ttgtttgtct ccccttttta aaatatataa tagcttatgt tcacttctca tagctccttt  
 180  
 ctttatgaaa aataacatga aaatagaaaa gttgttctaa gtatactttt tgtatatatt  
 240  
 ctagacttat cagatgtaga ctctctagat gattcttcaa cggagagttt gcttctgagt  
 300  
 ggggatgaat acaatcagga ctttgattca accaattttg aggaatctca ggatgaggat  
 360

gatgctctta atgaaattgt gcgatgtatt tgtgagatgg atgaggagaa tggcttcatg  
 420  
 atccagtgtg aagagtgcct gtgttggtgaa cacagcgtgt gcatggggct gctggaggag  
 480  
 agcattccag agcagtacat ctgctatatc tgccgggacc caccaggtca gaggtggagt  
 540  
 gcaaaatatc gttatgataa ggagtgggtg aataatggga gaatgtgcgg gttatcattt  
 600  
 ttcaaagaaa attattctca tctcaatgcc aaaaagatag tttctacaca tcacctgctt  
 660  
 gctgatgtct atggtgttac agaagtgtca cacgggctac agctgaagat tggaatacta  
 720  
 aagaataaac atcatcctga ccttcatctc tgggcttgtt ccgggaagcg aaaagaccaa  
 780  
 gatcaaataa tagctggggg ggagaaaaaa atagctcaag acacagttaa tcgagaagaa  
 840  
 aaaaaaa  
 847

&lt;210&gt; 5340

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5340

His	Glu	Asn	Arg	Lys	Val	Val	Leu	Ser	Ile	Leu	Phe	Val	Tyr	Ile	Leu
1				5					10					15	
Asp	Leu	Ser	Asp	Val	Asp	Phe	Leu	Asp	Asp	Ser	Ser	Thr	Glu	Ser	Leu
			20					25					30		
Leu	Leu	Ser	Gly	Asp	Glu	Tyr	Asn	Gln	Asp	Phe	Asp	Ser	Thr	Asn	Phe
		35					40					45			
Glu	Glu	Ser	Gln	Asp	Glu	Asp	Asp	Ala	Leu	Asn	Glu	Ile	Val	Arg	Cys
	50					55					60				
Ile	Cys	Glu	Met	Asp	Glu	Asn	Gly	Phe	Met	Ile	Gln	Cys	Glu	Glu	
65				70					75					80	
Cys	Leu	Cys	Trp	Gln	His	Ser	Val	Cys	Met	Gly	Leu	Leu	Glu	Glu	Ser
			85					90					95		
Ile	Pro	Glu	Gln	Tyr	Ile	Cys	Tyr	Ile	Cys	Arg	Asp	Pro	Pro	Gly	Gln
			100					105					110		
Arg	Trp	Ser	Ala	Lys	Tyr	Arg	Tyr	Asp	Lys	Glu	Trp	Leu	Asn	Asn	Gly
		115					120					125			
Arg	Met	Cys	Gly	Leu	Ser	Phe	Phe	Lys	Glu	Asn	Tyr	Ser	His	Leu	Asn
	130					135					140				
Ala	Lys	Lys	Ile	Val	Ser	Thr	His	His	Leu	Leu	Ala	Asp	Val	Tyr	Gly
145				150						155					160
Val	Thr	Glu	Val	Leu	His	Gly	Leu	Gln	Leu	Lys	Ile	Gly	Ile	Leu	Lys
			165					170					175		
Asn	Lys	His	His	Pro	Asp	Leu	His	Leu	Trp	Ala	Cys	Ser	Gly	Lys	Arg
		180					185					190			
Lys	Asp	Gln	Asp	Gln	Ile	Ile	Ala	Gly	Val	Glu	Lys	Lys	Ile	Ala	Gln
	195					200					205				
Asp	Thr	Val	Asn	Arg	Glu	Glu	Lys	Lys							
	210					215									

<210> 5341  
<211> 2455  
<212> DNA  
<213> Homo sapiens

<400> 5341  
nnatgagctg caggtacggt ccggaatccc gggctgaccc acgcgtccgg ctcttaggga  
60  
ggagctggta ccatgggtgt caggcaacag ttggccttgc tgctgctgct gctgctcctg  
120  
ctctggggcc tggggcagcc agtgtggcca gtcgctgtgg ccttgaccct gcgctggctc  
180  
ctgggggatc ccacatgttg cgtgctactt gggctggcca tgtagcacg gccctggctc  
240  
ggccccctgg tgccccatgg gctgagcctg gcagctgagg ccttggcact aacctcctg  
300  
ccagcacggc tgcccccagg actacgctgg ctgccggctg atgtgatctt cttggccaag  
360  
atcctccacc tgggctgaa gatcagggga tgcttgagcc ggcagccgcc tgacacctt  
420  
gtagatgctt tcgagcggcg agcacgagcg cagcctggca gggcactctt ggtgtggacg  
480  
gggcctgggg ccggctcagt cacctttggt gagctggatg cccgggcctg ccaggcggca  
540  
tgggccctga aggtgagct gggtagacct gcgagcctgt gtgccgggga gcctactgcc  
600  
ctccttgctg tggtttccca ggccgttcca gccctgtgta tgggctggg gctggccaag  
660  
ctgggctgcc caacagcctg gatcaaccgg catggccggg ggatgccctt ggcgcactct  
720  
gtgctgagct ctggggcccg ggtgctggtg gtggaccag acctccggga gagcctggag  
780  
gagatccttc ccaagctgca ggtgagaac atccgctgct tctacctcag ccatacctcc  
840  
cctacaccag ggggtggggc tctgggggct gccctggatg cagcgccctc ccaccagtg  
900  
cctgctgacc tgcgtgctgg gatcacatgg agaagcctg cctcttcat ctatacctcg  
960  
gggaccactg gcctcccgaa gccagccatc ctcacgcatg agcgggtact gcagatgagc  
1020  
aagatgctgt ccttatctgg ggccacagct gatgatgtgg ttacacggg cctgcctctg  
1080  
taccacgtga tgggacttgt cgttgggatc ctggctgct tagatctcgg agccactgt  
1140  
gttctggccc ccaagttctc tacttctctg ttctgggatg actgtcggca gcatggcgtg  
1200  
acagtgatcc tgtatgtggg cgagctcctg cggtagctgt gtaacattcc ccagcaacca  
1260  
gaggaccgga cacatacagt ccgctggca atgggcaatg gactacgggc tgatgtgtgg  
1320  
gagaccttcc agcagcgctt cggctctatt cggatctggg aagtctacgg ctccacagaa  
1380  
ggcaacatgg gcttagtcaa ctatgtgggg cgctgcgggg ccttgggcaa gatgagctgc  
1440

ctctccgaa tgctgtcccc ctttgagctg gtgcagttcg acatggaggc ggcggagcct  
 1500  
 gtgagggaca atcagggcct ctgcatccct gtagggctag gggagccggg gctgctgctg  
 1560  
 accaaggtgg taagccagca acccttcgtg ggctaccgag gccccgaga gctgtcggaa  
 1620  
 cggaagctgg tgcgcaacgt gcggaatcg ggcgacgttt actacaacac cggggacgta  
 1680  
 ctggccatgg accggaagg ctctctctac ttccgcgacc gcctcgggga caccttcgga  
 1740  
 tgggaagggcg agaacgtgtc cagcacgag gtggagggcg tgtgtcgca ggtggacttc  
 1800  
 ttgcaacagg ttaacgtgta tggcgtgtgc gtgccagggt gtgagggtaa ggtgggcatg  
 1860  
 gctgctgtgc agctagcccc cgccagact ttcgacgggg agaagttgta ccagcacgtt  
 1920  
 cgcgcttggc tccctgccta cgtaccccc catttcatcc gcatccagga cgccatggag  
 1980  
 gtcaccagca cgttcaaact gatgaagacc cggttggtgc gtgagggcct caatgtgggg  
 2040  
 atcgtgggtg accctctgtt tgtactggac aaccggggcc agtccttcg gccctgacg  
 2100  
 gcagaaatgt accaggctgt gtgtgagga acctggaagc tctgatcacc tggccaaccc  
 2160  
 actggggtag gggtaggat caaagccagc caccaccacc ccaacacact cggtgtccct  
 2220  
 ttcatcctgg gcctgtgtga atccagcct ggccataccc tcaacctcag tgggtggaa  
 2280  
 atgacagtgg gccctgtagc agtggcagaa taaactcaga tgtgttcaca aaaaaaaca  
 2340  
 cgcacgaggt ggagggcggt ttgtcgagg tggacttctt gcaacagggt aacgtgtatg  
 2400  
 gcgtgtgcgt gccaggttgt gagggtaagg tgggcatggc tgctgtgcag ctage  
 2455

&lt;210&gt; 5342

&lt;211&gt; 690

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5342

Met Gly Val Arg Gln Leu Ala Leu Leu Leu Leu Leu Leu Leu  
 1 5 10 15  
 Leu Trp Gly Leu Gly Gln Pro Val Trp Pro Val Ala Val Ala Leu Thr  
 20 25 30  
 Leu Arg Trp Leu Leu Gly Asp Pro Thr Cys Cys Val Leu Leu Gly Leu  
 35 40 45  
 Ala Met Leu Ala Arg Pro Trp Leu Gly Pro Trp Val Pro His Gly Leu  
 50 55 60  
 Ser Leu Ala Ala Ala Ala Leu Ala Leu Thr Leu Leu Pro Ala Arg Leu  
 65 70 75 80  
 Pro Pro Gly Leu Arg Trp Leu Pro Ala Asp Val Ile Phe Leu Ala Lys  
 85 90 95  
 Ile Leu His Leu Gly Leu Lys Ile Arg Gly Cys Leu Ser Arg Gln Pro



```

100      105      110
Pro Asp Thr Phe Val Asp Ala Phe Glu Arg Arg Ala Arg Ala Gln Pro
115      120      125
Gly Arg Ala Leu Leu Val Trp Thr Gly Pro Gly Ala Gly Ser Val Thr
130      135      140
Phe Gly Glu Leu Asp Ala Arg Ala Cys Gln Ala Ala Trp Ala Leu Lys
145      150      155      160
Ala Glu Leu Gly Asp Pro Ala Ser Leu Cys Ala Gly Glu Pro Thr Ala
165      170      175
Leu Leu Val Leu Ala Ser Gln Ala Val Pro Ala Leu Cys Met Trp Leu
180      185      190
Gly Leu Ala Lys Leu Gly Cys Pro Thr Ala Trp Ile Asn Pro His Gly
195      200      205
Arg Gly Met Pro Leu Ala His Ser Val Leu Ser Ser Gly Ala Arg Val
210      215      220
Leu Val Val Asp Pro Asp Leu Arg Glu Ser Leu Glu Glu Ile Leu Pro
225      230      235      240
Lys Leu Gln Ala Glu Asn Ile Arg Cys Phe Tyr Leu Ser His Thr Ser
245      250      255
Pro Thr Pro Gly Val Gly Ala Leu Gly Ala Ala Leu Asp Ala Pro
260      265      270
Ser His Pro Val Pro Ala Asp Leu Arg Ala Gly Ile Thr Trp Arg Ser
275      280      285
Pro Ala Leu Phe Ile Tyr Thr Ser Gly Thr Thr Gly Leu Pro Lys Pro
290      295      300
Ala Ile Leu Thr His Glu Arg Val Leu Gln Met Ser Lys Met Leu Ser
305      310      315      320
Leu Ser Gly Ala Thr Ala Asp Asp Val Val Tyr Thr Val Leu Pro Leu
325      330      335
Tyr His Val Met Gly Leu Val Val Gly Ile Leu Gly Cys Leu Asp Leu
340      345      350
Gly Ala Thr Cys Val Leu Ala Pro Lys Phe Ser Thr Ser Cys Phe Trp
355      360      365
Asp Asp Cys Arg Gln His Gly Val Thr Val Ile Leu Tyr Val Gly Glu
370      375      380
Leu Leu Arg Tyr Leu Cys Asn Ile Pro Gln Gln Pro Glu Asp Arg Thr
385      390      395      400
His Thr Val Arg Leu Ala Met Gly Asn Gly Leu Arg Ala Asp Val Trp
405      410      415
Glu Thr Phe Gln Gln Arg Phe Gly Pro Ile Arg Ile Trp Glu Val Tyr
420      425      430
Gly Ser Thr Glu Gly Asn Met Gly Leu Val Asn Tyr Val Gly Arg Cys
435      440      445
Gly Ala Leu Gly Lys Met Ser Cys Leu Leu Arg Met Leu Ser Pro Phe
450      455      460
Glu Leu Val Gln Phe Asp Met Glu Ala Ala Glu Pro Val Arg Asp Asn
465      470      475      480
Gln Gly Phe Cys Ile Pro Val Gly Leu Gly Glu Pro Gly Leu Leu Leu
485      490      495
Thr Lys Val Val Ser Gln Gln Pro Phe Val Gly Tyr Arg Gly Pro Arg
500      505      510
Glu Leu Ser Glu Arg Lys Leu Val Arg Asn Val Arg Gln Ser Gly Asp
515      520      525
Val Tyr Tyr Asn Thr Gly Asp Val Leu Ala Met Asp Arg Glu Gly Phe

```

530		535		540
Leu Tyr Phe Arg Asp Arg	Leu Gly Asp Thr Phe Arg Trp Lys Gly Glu			
545	550	555	560	
Asn Val Ser Thr His Glu Val	Gly Val Leu Ser Gln Val Asp Phe			
565	570	575		
Leu Gln Gln Val Asn Val Tyr	Gly Val Cys Val Pro Gly Cys Glu Gly			
580	585	590		
Lys Val Gly Met Ala Ala Val	Gln Leu Ala Pro Gly Gln Thr Phe Asp			
595	600	605		
Gly Glu Lys Leu Tyr Gln His	Val Arg Ala Trp Leu Pro Ala Tyr Ala			
610	615	620		
Thr Pro His Phe Ile Arg Ile	Gln Asp Ala Met Glu Val Thr Ser Thr			
625	630	635	640	
Phe Lys Leu Met Lys Thr Arg	Leu Val Arg Glu Gly Phe Asn Val Gly			
645	650	655		
Ile Val Val Asp Pro Leu Phe	Val Leu Asp Asn Arg Ala Gln Ser Phe			
660	665	670		
Arg Pro Leu Thr Ala Glu Met	Tyr Gln Ala Val Cys Glu Gly Thr Trp			
675	680	685		
Lys Leu				
690				

&lt;210&gt; 5343

&lt;211&gt; 752

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5343

tctagaagcc tgcggcaagg tcgcctctac cggcagccca agttcctgcg gacgatggac  
 60  
 gtgttcgaca tggaacaggg gggatggctg aagatggaac gatcgttctt cctcaagaag  
 120  
 cggcgggcag attttgtggc tggtctctctg agtggacggg tcatagtggc tgggggactt  
 180  
 gggaatcaac ccactgtcct ggagacggcg gaagcattcc acccagggaa gaacaaatgg  
 240  
 gagatcctcc ctgccatgcc cacaccccg cgtgctgct ccagcatagt cgtcaagaac  
 300  
 tgcctcctcg ctgtgggagg tgtcaaccag ggtctgagtg acgcagtga ggcctgtgt  
 360  
 gtctctgact cctagctgtc tctgggctca gtacctttgc cctggaccat atcacttcac  
 420  
 tcttaacatg aggaatgatc ttgtccaagc agtcggggct acttccaaga atgtcagctc  
 480  
 ctgttagcaa ccagtggagt ctggccttgg ggctctaagt tgacctctct atagctccaa  
 540  
 atcttaccaa tctcagaaaa ctgtaagagg cacagatgac tccaccagct gcagagctga  
 600  
 ctctgaagag agtcttcact tactgcacag gcaaagaaag gcacaggaat atttctacc  
 660  
 tctccctcct gtgagtccca cctcccccca ccccatctc caggaggcag gttagagcagt  
 720  
 tctgaccgag aggatagact gctgttgcgtg tc  
 752

&lt;210&gt; 5344

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5344

```

Ser Arg Ser Leu Arg Gln Gly Arg Leu Tyr Arg Gln Pro Lys Phe Leu
 1           5           10           15
Arg Thr Met Asp Val Phe Asp Met Glu Gln Gly Gly Trp Leu Lys Met
      20           25           30
Glu Arg Ser Phe Phe Leu Lys Lys Arg Arg Ala Asp Phe Val Ala Gly
      35           40           45
Ser Leu Ser Gly Arg Val Ile Val Ala Gly Gly Leu Gly Asn Gln Pro
      50           55           60
Thr Val Leu Glu Thr Ala Glu Ala Phe His Pro Gly Lys Asn Lys Trp
      65           70           75           80
Glu Ile Leu Pro Ala Met Pro Thr Pro Arg Cys Ala Cys Ser Ser Ile
      85           90           95
Val Val Lys Asn Cys Leu Leu Ala Val Gly Gly Val Asn Gln Gly Leu
      100          105          110
Ser Asp Ala Val Glu Ala Leu Cys Val Ser Asp Ser
      115          120

```

&lt;210&gt; 5345

&lt;211&gt; 1912

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5345

```

nnctagaatt cagcggccgc tgaattctag gcggcgcggc ggcgacggag caccggcggc
60
ggcagggcga gaggattaaa tgaaagcaaa agagttaata atggcaacac ggctccagaa
120
gactcttccc ctgccaagaa aactcgtaga tgccagagac aggagtcgaa aaagatgcct
180
gtggctggag gaaaagctaa taaggacagg acagaagaca agcaagatgg tatgccagga
240
aggtcatggg ccagcaaaag ggtctctgaa tctgtgaagg ccttgctgtt aaagggcaaa
300
gctcctgtgg acccagagtg tacagccaag gtggggaagg ctcagtgtga ttgtgaagga
360
aatgatgtct atgatgtcat gctaaatcag accaatctcc agttcaacaa caacaagtac
420
tatctgattc agctattaga agatgatgcc cagaggaact tcagtgtttg gatgagatgg
480
ggccgagttg ggaaaatggg acagcacagc ctggtggcct gttcaggcaa tctcaacaag
540
gccaaggaaa tctttcagaa gaaattcctt gacaaaacga aaaacaattg ggaagatcga
600
gaaaagtgtg agaaggtgcc tggaaaatat gatatgctac agatggacta tgccaccaat
660
actcaggatg aagaggaaac aaagaaagag gaatctctta aatctccctt gaagccagag
720

```

tcacagctag atcttcgggt acaggagtta ataaagttga tctgtaatgt tcaggccatg  
 780  
 gaagaaatga tgatggaaat gaagtataat accaagaaag cccacttgg gaagctgaca  
 840  
 gtggcacaaa tcaaggcagg ttaccagtct cttaagaaga ttgaggattg tattcgggct  
 900  
 ggccagcatg gacgagctct catggaagca tgcaatgaat tctacaccag gattccgcat  
 960  
 gactttggac tccgtactcc tccactaatc cggacacaga aggaactgtc agaaaaaata  
 1020  
 caattactag aggctttggg agacattgaa attgctatta agctgggtgaa aacagagcta  
 1080  
 caaagcccag aacacccatt ggaccaacac tatagaaacc tacattgtgc cttgcgcccc  
 1140  
 cttgaccatg aaagttacga gttcaaagtg atttcccagt acctacaatc taccatgct  
 1200  
 cccacacaca gcgactatac catgaccttg ctggatttgt ttgaagtgga gaaggatggt  
 1260  
 gagaaagaag ccttcagaga ggaccttcat aacaggatgc ttctatggca tggttccagg  
 1320  
 atgagtaact ggggtgggaat cttgagccat gggcttcgaa ttgccccacc tgaagctccc  
 1380  
 atcacagggt acatgtttgg gaaaggaatc tactttgctg acatgtcttc caagagtgcc  
 1440  
 aattactgct ttgcctctcg cctaaagaat acaggactgc tgctcttacc agaggtagct  
 1500  
 ctaggtcagt gtaatgaact actagaggcc aatcctaagg ccgaaggatt gttcaaggt  
 1560  
 aaacatagca ccaaggggct gggcaagatg gctcccagtt ctgcccactt cgtcacctg  
 1620  
 aatgggagta cagtgccatt aggaccagca agtgacacag gaattctgaa tccagatggt  
 1680  
 tataccctca actacaatga atatattgta tataacocca accagggtccg tatgcggtac  
 1740  
 cttttaaagg ttcagtttaa ttctcttcag ctgtggtgaa tgttgatatt aaataaacca  
 1800  
 gagatctgat cttcaagcaa gaaaataagc agtgtgtgac ttgtgaattt tgtgatattt  
 1860  
 tatgtaataa aaactgtaca ggtctaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1912

&lt;210&gt; 5346

&lt;211&gt; 534

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5346

Met Pro Val Ala Gly Gly Lys Ala Asn Lys Asp Arg Thr Glu Asp Lys  
 1 5 10 15  
 Gln Asp Gly Met Pro Gly Arg Ser Trp Ala Ser Lys Arg Val Ser Glu  
 20 25 30  
 Ser Val Lys Ala Leu Leu Leu Lys Gly Lys Ala Pro Val Asp Pro Glu  
 35 40 45  
 Cys Thr Ala Lys Val Gly Lys Ala His Val Tyr Cys Glu Gly Asn Asp

4521

	485		490		495
Ile Leu Asn Pro Asp Gly Tyr Thr	Leu Asn Tyr Asn Glu Tyr Ile Val				
	500		505		510
Tyr Asn Pro Asn Gln Val Arg Met Arg Tyr Leu Leu Lys Val Gln Phe					
	515		520		525
Asn Phe Leu Gln Leu Trp					
530					

&lt;210&gt; 5347&lt;211&gt; 2893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5347

gagcttgccc accgcgccgg gctgcgggcg gctgggcgaa cgggctcggc gctcaggtgg  
 60  
 ctccctcttc gcttctcccg atccccggcg gtgccaggca cggtgccggc tgccgagggg  
 120  
 acgcctttgt gcccggtgct gggaaccgcg gacggccgcc acgcgccccg gtccattggt  
 180  
 tcgcttatct gggttccagg caggtgcggg cggcgcgcg ggtccgcacg tgtcaccctg  
 240  
 gcggctgggg cgccgggacc cgccggcgcc ggcaggggcg ttccccggcg cgcggcggcg  
 300  
 atgaagcacc tgaagcgggt gtggctggcc ggcggcggcc tctgcacct caccctctg  
 360  
 ctgagcttgg cggggctccg cgtagaccta gatctttacc tgetgctgcc gccgccacc  
 420  
 ctgctgcagg acgagctgct gttcctgggc ggccccgcca gtcgcgcta cgcgctcagc  
 480  
 cccttctcgg cctcgggagg gtgggggcg gcgggccact tgcaccccaa gggccgggag  
 540  
 ctggaccctg ccgcgccgcc cgagggccag ctgctccggg aggtgcgcgc gtcgggggtc  
 600  
 cccttcgtcc ctgcaccag cgtggatgca tggctggtgc acagcgtggc tgccgggagc  
 660  
 gcggacgagg ccacagggct gctcggcgcc gcccgccct cgtccaccgg aggagccggc  
 720  
 gccagcgtgg acggcggcag ccaggctgtg caggggggct gcggggactc ccgagcggct  
 780  
 cggagtggcc ccttggaagc cggggaagag gagaaggcac ccgcggaacc gacggctcag  
 840  
 gtgccggacg ctggcggatg tgcgagcgag gagaatggg tactaagaga aaagcacgaa  
 900  
 gctgtggatc atagtccca gcatgaggaa aatgaagaaa ggggtgtcag ccagaaggag  
 960  
 aactcacttc agcagaatga tgatgatgaa aacaaaatag cagagaaacc tgactgggag  
 1020  
 gcagaaaaga cactgaatc tagaatgag agacatctga atgggacaga tacttcttct  
 1080  
 tctctggaag acttattcca gttgctttca tcacagcctg aaaattcact ggagggcatc  
 1140  
 tcattgggag atattcctct tccaggcagt atcagtgatg gcatgaattc ttcagcacat  
 1200

tatcatgtaa acttcagcca ggctataagt caggatgtga atcttcatga ggccatcttg  
1260  
ctttgtccca acaatacatt tagaagagat ccaacagcaa ggacttcaca gtcacaagaa  
1320  
ccatttctgc agttaaattc tcataccacc aatcctgagc aaacccttcc tggaactaat  
1380  
ttgacaggat ttctttcacc gggtgacaat catatgagga atctaacaag ccaagaccta  
1440  
ctgtatgacc ttgacataaa tatatttgat gagataaact taatgtcatt ggccacagaa  
1500  
gacaactttg atccaatcga tgtttctcag ctttttgatg aatcagattc tgattctggc  
1560  
ctttcttttag attcaagtca caataatacc tctgtcatca agtctaattc ctctcactct  
1620  
gtgtgtgatg aagggtgctat aggttattgc actgaccatg aatctagtgc ccatcatgac  
1680  
ttagaagggtg ctgtagggtg ctactacca gaaccagta agctttgtca cttggatcaa  
1740  
agtgattctg atttccatgg agatcttaca tttcaacacg tatttcataa ccacacttac  
1800  
cacttacagc caactgcacc agaactact tctgaacctt ttccgtggcc tgggaagtca  
1860  
cagaagataa ggagtagata cttgaagac acagatagaa acttgagccg tgatgaacag  
1920  
cgtgctaaag ctttgcatac ccctttttct gtagatgaaa ttgtcggcat gcctgttgat  
1980  
tctttcaata gcatgttaag tagatattat ctgacagacc tacaagtctc acttatccgt  
2040  
gacatcagac gaagagggaa aaataaagtt gctgcgcaga actgtcgtaa acgcaaattg  
2100  
gacataatth tgaatttaga agatgatgta tgtaacttgc aagcaaagaa ggaaactctt  
2160  
aagagagagc aagcacaatg taacaaagct attaacataa tgaaacagaa actgcatgac  
2220  
ctttatcatg atatttttag tagattaaga gatgaccaag gtaggccagt caatcccaac  
2280  
cactatgctc tccagtgtac ccatgatgga agtatcttga tagtaccxaa agaactggtg  
2340  
gcctcaggcc acaaaaagga aacccaaaag ggaaagagaa agtgagaaga aactgaagat  
2400  
ggactctatt atgtgaagta gtaatgttca gaaactgatt atttggatca gaaaccattg  
2460  
aaactgctc aagaattgta tctttaagta ctgctacttg aataactcag ttaacgctgt  
2520  
tttgaagctt acatggacaa atgttttaga cttcaagatc acacttggtg gcaatctggg  
2580  
ggagccacaa cttttcatga agtgcattgt atacaaaatt catagtattg tccaaagaat  
2640  
aggttaacat gaaaaccag taagactttc catcttggca gccatccttt ttaagagtaa  
2700  
gttggttact tcaaaaagag caaacactgg ggatcaaatt attttaagag gtatttcagt  
2760  
tttaaagca aaatagcctt attttcattt agtttggttag cactatagtg agcttttcaa  
2820

acactatttt aatctttata tttaacttat aaattttgct ttctatggaa ataaattttg  
2880  
tatttggtatt aaa  
2893

<210> 5348

<211> 694

<212> PRT

<213> Homo sapiens

<400> 5348

Met	Lys	His	Leu	Lys	Arg	Trp	Trp	Ser	Ala	Gly	Gly	Gly	Leu	Leu	His
1				5				10					15		
Leu	Thr	Leu	Leu	Leu	Ser	Leu	Ala	Gly	Leu	Arg	Val	Asp	Leu	Asp	Leu
		20						25					30		
Tyr	Leu	Leu	Leu	Pro	Pro	Pro	Thr	Leu	Leu	Gln	Asp	Glu	Leu	Leu	Phe
	35						40					45			
Leu	Gly	Gly	Pro	Ala	Ser	Ser	Ala	Tyr	Ala	Leu	Ser	Pro	Phe	Ser	Ala
	50				55						60				
Ser	Gly	Gly	Trp	Gly	Arg	Ala	Gly	His	Leu	His	Pro	Lys	Gly	Arg	Glu
65					70					75				80	
Leu	Asp	Pro	Ala	Ala	Pro	Pro	Glu	Gly	Gln	Leu	Leu	Arg	Glu	Val	Arg
				85				90						95	
Ala	Leu	Gly	Val	Pro	Phe	Val	Pro	Arg	Thr	Ser	Val	Asp	Ala	Trp	Leu
		100						105					110		
Val	His	Ser	Val	Ala	Ala	Gly	Ser	Ala	Asp	Glu	Ala	His	Gly	Leu	Leu
	115						120					125			
Gly	Ala	Ala	Ala	Ala	Ser	Ser	Thr	Gly	Gly	Ala	Gly	Ala	Ser	Val	Asp
	130						135					140			
Gly	Gly	Ser	Gln	Ala	Val	Gln	Gly	Gly	Cys	Gly	Asp	Ser	Arg	Ala	Ala
145					150					155				160	
Arg	Ser	Gly	Pro	Leu	Asp	Ala	Gly	Glu	Glu	Glu	Lys	Ala	Pro	Ala	Glu
			165					170						175	
Pro	Thr	Ala	Gln	Val	Pro	Asp	Ala	Gly	Gly	Cys	Ala	Ser	Glu	Glu	Asn
		180						185					190		
Gly	Val	Leu	Arg	Glu	Lys	His	Glu	Ala	Val	Asp	His	Ser	Ser	Gln	His
	195						200					205			
Glu	Glu	Asn	Glu	Glu	Arg	Val	Ser	Ala	Gln	Lys	Glu	Asn	Ser	Leu	Gln
	210					215						220			
Gln	Asn	Asp	Asp	Asp	Glu	Asn	Lys	Ile	Ala	Glu	Lys	Pro	Asp	Trp	Glu
225					230					235				240	
Ala	Glu	Lys	Thr	Thr	Glu	Ser	Arg	Asn	Glu	Arg	His	Leu	Asn	Gly	Thr
			245					250						255	
Asp	Thr	Ser	Phe	Ser	Leu	Glu	Asp	Leu	Phe	Gln	Leu	Leu	Ser	Ser	Gln
		260						265					270		
Pro	Glu	Asn	Ser	Leu	Glu	Gly	Ile	Ser	Leu	Gly	Asp	Ile	Pro	Leu	Pro
	275						280					285			
Gly	Ser	Ile	Ser	Asp	Gly	Met	Asn	Ser	Ser	Ala	His	Tyr	His	Val	Asn
	290					295						300			
Phe	Ser	Gln	Ala	Ile	Ser	Gln	Asp	Val	Asn	Leu	His	Glu	Ala	Ile	Leu
305					310					315				320	
Leu	Cys	Pro	Asn	Asn	Thr	Phe	Arg	Arg	Asp	Pro	Thr	Ala	Arg	Thr	Ser
			325					330						335	
Gln	Ser	Gln	Glu	Pro	Phe	Leu	Gln	Leu	Asn	Ser	His	Thr	Thr	Asn	Pro



```

      340      345      350
Glu Gln Thr Leu Pro Gly Thr Asn Leu Thr Gly Phe Leu Ser Pro Val
      355      360      365
Asp Asn His Met Arg Asn Leu Thr Ser Gln Asp Leu Leu Tyr Asp Leu
      370      375      380
Asp Ile Asn Ile Phe Asp Glu Ile Asn Leu Met Ser Leu Ala Thr Glu
385      390      395      400
Asp Asn Phe Asp Pro Ile Asp Val Ser Gln Leu Phe Asp Glu Ser Asp
      405      410      415
Ser Asp Ser Gly Leu Ser Leu Asp Ser Ser His Asn Asn Thr Ser Val
      420      425      430
Ile Lys Ser Asn Ser Ser His Ser Val Cys Asp Glu Gly Ala Ile Gly
      435      440      445
Tyr Cys Thr Asp His Glu Ser Ser His His Asp Leu Glu Gly Ala
      450      455      460
Val Gly Gly Tyr Tyr Pro Glu Pro Ser Lys Leu Cys His Leu Asp Gln
465      470      475      480
Ser Asp Ser Asp Phe His Gly Asp Leu Thr Phe Gln His Val Phe His
      485      490      495
Asn His Thr Tyr His Leu Gln Pro Thr Ala Pro Glu Ser Thr Ser Glu
      500      505      510
Pro Phe Pro Trp Pro Gly Lys Ser Gln Lys Ile Arg Ser Arg Tyr Leu
      515      520      525
Glu Asp Thr Asp Arg Asn Leu Ser Arg Asp Glu Gln Arg Ala Lys Ala
      530      535      540
Leu His Ile Pro Phe Ser Val Asp Glu Ile Val Gly Met Pro Val Asp
545      550      555      560
Ser Phe Asn Ser Met Leu Ser Arg Tyr Tyr Leu Thr Asp Leu Gln Val
      565      570      575
Asp Ile Arg Arg Arg Gly Lys Asn Lys Val Ala Ala
      580      585      590
Gln Asn Cys Arg Lys Arg Lys Leu Asp Ile Ile Leu Asn Leu Glu Asp
      595      600      605
Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
      610      615      620
Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
625      630      635      640
Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
      645      650      655
Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
      660      665      670
Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
      675      680      685
Gln Lys Gly Lys Arg Lys
      690

```

&lt;210&gt; 5349

&lt;211&gt; 425

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5349

gtgcacgaag ttccaatggg cttatgggag ggctaggtct ccacttcttt gtacctacac  
60

acagttctca ggtcactgca tgtcactcct caccactgcc ctgtggttgc caggacaact  
 120  
 tgggcaaaca ccacaccagc agggagcccc aagcccagcc caagccccac aaagtctcca  
 180  
 gccaggaagg ggaaggcagg ataccactgc ctgggaaggc ggaagtgaga gaggcaggcc  
 240  
 aaccattcc tgtttctctt ctacttcttt ctccaaagaa agccctcact ctctctgcta  
 300  
 cagcccaggg aggtcacgag gggctgggaa gactcctgtg gcaaagtggc ccactccage  
 360  
 ccaggcctga gaaaaaagg accccgaaat ccttctggct accagtatct tctgccttca  
 420  
 cgcgt  
 425

&lt;210&gt; 5350

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5350

Met	Gly	Gly	Leu	Gly	Leu	His	Phe	Phe	Val	Pro	Thr	His	Ser	Ser	Gln
1				5					10					15	
Val	Thr	Ala	Cys	His	Ser	Ser	Pro	Leu	Pro	Cys	Gly	Cys	Gln	Asp	Asn
		20					25						30		
Leu	Gly	Lys	His	His	Thr	Ser	Arg	Glu	Pro	Gln	Ala	Gln	Pro	Lys	Pro
		35					40					45			
His	Lys	Val	Ser	Ser	Gln	Glu	Gly	Glu	Gly	Arg	Ile	Pro	Leu	Pro	Gly
	50					55				60					
Lys	Ala	Glu	Val	Arg	Glu	Ala	Gly	Gln	Pro	Ile	Pro	Val	Ser	Leu	Leu
65					70				75					80	
Leu	Leu	Ser	Pro	Lys	Lys	Ala	Leu	Thr	Leu	Leu	Ala	Thr	Ala	Gln	Gly
			85					90						95	
Gly	His	Glu	Gly	Leu	Gly	Arg	Leu	Leu	Trp	Gln	Ser	Gly	Pro	Leu	Gln
		100					105						110		
Pro	Arg	Pro	Glu	Lys	Lys	Arg	Thr	Pro	Lys	Ser	Phe	Trp	Leu	Pro	Val
		115					120					125			
Ser	Ser	Ala	Phe	Thr	Arg										
															130

&lt;210&gt; 5351

&lt;211&gt; 343

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5351

gtgcacagtc agctcgacta ggggtgcata ggccgcgctg cactgtcggc atcggaatct  
 60  
 gctggcccct gtgaacacag tcccgcacat cttgctgctc tgtcggtaga actgcaccga  
 120  
 gctgaacagg ctgggtttcg agacggaccg agaaggcaag ttctgctgca ggcttttggg  
 180  
 cagagcgtct tgggtccaat caaaatcact cttgttgctg ccgtttcggg tgtcacagtt  
 240

cctcctctca ctattggaca gcttgaagcc aaggcccagg cctgaccagt aggaatccga  
 300  
 caggatgttg gcgtagacag cggtcatttt atccatgcaa ttg  
 343

<210> 5352  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

<400> 5352  
 Met Asp Lys Met Thr Ala Val Tyr Ala Asn Ile Leu Ser Asp Ser Tyr  
 1 5 10 15  
 Trp Ser Gly Leu Gly Leu Gly Phe Lys Leu Ser Asn Ser Glu Arg Arg  
 20 25 30  
 Asn Cys Asp Thr Arg Asn Gly Ser Asn Lys Ser Asp Phe Asp Trp His  
 35 40 45  
 Gln Asp Ala Leu Ser Lys Ser Leu Gln Gln Asn Leu Pro Ser Arg Ser  
 50 55 60  
 Val Ser Lys Pro Ser Leu Phe Ser Ser Val Gln Leu Tyr Arg Gln Ser  
 65 70 75 80  
 Ser Lys Met Cys Gly Thr Val Phe Thr Gly Ala Ser Arg Phe Arg Cys  
 85 90 95  
 Arg Gln Cys Ser Ala Ala Tyr Asp Thr Leu Val Glu Leu Thr Val His  
 100 105 110

<210> 5353  
 <211> 4217<212> DNA  
 <213> Homo sapiens

<400> 5353  
 tttttttttt ttgaaatgta agtatacaga ttttaattta tttttaagaa taattgtata  
 60  
 ttttaaaaac aggacacgta ctgtatgagt aaacagcgtg gctaacacca agtccacact  
 120  
 ggtaagcttt tgagaacat ttacactatg ttgacagtag tactgctgca ggcagacagc  
 180  
 ggaagaataa ataatagtgc ttcaagaaga gtagtgattg agaggatagg taaagagggc  
 240  
 gcctcatcgt ggaagctaga gcaggaacac ctccccagta gtgacatgtg caaagttcca  
 300  
 aatctccacg acaaagacag ctcaaccac tggaacaaac agactcccaa tgtggctggc  
 360  
 aactgcgagg gtagaagaac tcaggcaaag taggcacagg aatgggggag atgagagcca  
 420  
 agggacaaac gccgagaaag cgttccgaca agcatgtgtg ttcatacatg cataccccca  
 480  
 acaaagggca atgcactgtg taacagaact gaacacaatt taacaaagct gctcccagcc  
 540  
 ttctgtcac ctctttggca gtagggcagg ccatctcaac ttcggacaca caaagacatt  
 600  
 ctcttcagga ggaaggctgt cctgtgtggt ggggacaagg cttcaggtaa gagcaaagct  
 660

atgatagcta cagcattaat tgaacatgcc taaacaaaaa agatgttaat tactagttac  
720  
aggatacat gccaaaatta cccccagga tgggcatagt caatcatttt cctacagtgg  
780  
tgaaataaaa caagctttga tcatgcttca gcaagtagaa ttatgtggta gagaagtcag  
840  
gccccatatg ctaaaatttg cacttcttgc cataaacttt tcatgtatat aagtcaaaac  
900  
ccagtctcct aggaccacta aacctatgat gggctttcaa ctgtaacact cattcacatc  
960  
tttaagttag gcccatgggc atggaacctg gccaaaggtt caagcacgcc taagctgaag  
1020  
aaaaactaaa gtcaccccca tataattagg tccagtctag gcacaggaag ccacagctgg  
1080  
ttgactgac agggcttctc aggactggat gttgggtgaa ttgaggattc cagaagtagc  
1140  
atcagatttg gaagcctttg aaagttctcg ctgttgaaaa ataaataaca tcagtggcca  
1200  
tactgcctct cttacacatg gccaccctt ctaagtttgg ttaagtgca gcaaaaggtc  
1260  
ccttgaaggt agtttctctg agatccctag cctgcaatag gctgcgttag gagtaaaagg  
1320  
tgaggaactc tgagcaccat tctattagtc acagacagag tgcattgtgca cgcagtcg  
1380  
tgaccccgcc ggggccagga ggaagctgga gccggaggcc gggcgaggag ttggtctccg  
1440  
ccgcccaggg tcagccgctc cgcgcacgtc cctcgtctgc agcgtaccg cgagctgcac  
1500  
cggcgctccg tggaggagcc gcgggaattc tggggagaca ttgccaagga attttactgg  
1560  
aagactccat gccctggccc attccttcgg tacaactttg atgtgactaa agggaaaatc  
1620  
ttcattgagt ggatgaaagg agcaactacc aacatctgct acaatgtact ggatcgaat  
1680  
gtccatgaga aaaagcttgg agataaagtt gctttttact gggagggcaa tgagccaggg  
1740  
gagaccactc agatcacata ccatcagctt ctggtccaag tgtgtcagtt cagcaatgtt  
1800  
ctccgaaaac agggcattca gaagggggac cgagtggcca tctacatgcc tatgatccca  
1860  
gagcttgtgg tggccatgct ggcattgtgcc cgcattgggg ctttgcactc cattgtgttt  
1920  
gcaggcttct cttcagagtc tctatgtgaa cggatcttgg attccagctg cagtcttctc  
1980  
atcactacag atgccttcta caggggggaa aagcttgtga acctgaagga gctggctgac  
2040  
gaggccctgc agaagtgtca ggagaagggt ttcccagtaa gatgctgcat tgtggtcaag  
2100  
cacctggggc gggcagagct cggcatgggt actccaccag ccagtccccc ccaattaaga  
2160  
ggcatgccc atgtgcagat ctcattggaac caagggattg acttgtggtg gcatgagctc  
2220  
atgcaagagg caggggatga gtgtgagccc gagtgggtgt atgccgagga cccactcttc  
2280

atcctgtaca ccagtggctc cacaggcaaa cccaaggggtg tggttcacac agttgggggc  
2340  
tacatgctct atgtagccac aaccttcaag tatgtgtttg acttccatgc agaggatgtg  
2400  
ttctggtgca cggcagacat tggttggatc actggtcatt cctacgtcac ctatgggcca  
2460  
ctggccaatg gtgccaccag tgttttgttt gaggggattc ccacatatcc ggacgtgaac  
2520  
cgcctgtgga gcattgtgga caaatacaag gtgaccaagt tctacacagc acccacagcc  
2580  
atccgtctgc tcatgaagtt tggagatgag cctgtcacca agcatagccg ggcaccttg  
2640  
cagggtgttag gcacagtggg tgaacccatc aaccttgagg cctggctatg gtaccaccgg  
2700  
gtggtagggtg cccagcgctg ccccatcggtg gacaccttct ggcaaacaga gacaggtggc  
2760  
cacatgttga ctccccctcc tgttcccaca cccatgaaac ccggttctgc tactttccca  
2820  
ttctttgggtg tagctcctgc aatcctgaat gagtccgggg aagagttgga aggtgaagct  
2880  
gaaggttatc tgggtgttcaa gcagccctgg ccagggatca tgcgcacagt ctatgggaac  
2940  
cacgaacgct ttgagacaac ctactctaag aagtttctctg gatactatgt tacaggagat  
3000  
ggctgccagc gggaccagga tggctattac tggatcactg gcaggattga tgacatgctc  
3060  
aatgtatctg gacacctgct gagtacagca gaggtggagt cagcacttgt ggaacatgag  
3120  
gctgttgcag aggcagctgt ggtggggccac cctcatcctg tgaaggggtga atgcctctac  
3180  
tgctttgtca ccttgtgtga tggccacacc ttcagcccca agctcaccga ggagctcaag  
3240  
aagcagatta gagaaaagat tggccccatt gccacaccag actacatcca gaatgcacct  
3300  
ggcttgccca aaacccgctc agggaaaatc atgaggcgag tgcttcggaa gattgctcag  
3360  
aatgaccatg acctcgggga catgtctact gtggctgacc catctgtcat cagtcacctc  
3420  
ttcagccacc gctgcctgac catccagtga acatgatcct gacctttacc taggattcct  
3480  
cctgctccaa actttgcccc tctcttttgc cccctcagga gtgctgaggg ccagtgttga  
3540  
cccacactac cctcccttga ccagctgtct gggaccggaa accagctttg tctccaggta  
3600  
gagacaacat cctgtgactg ccaggcagaa aggacagggc ccaggtcagc ctcagtctgc  
3660  
tgtgcctcca gactgcagag ctctcagaac ccagaacaga gacgaaaagg ctacctctcc  
3720  
tacccaagtt aagtgttcaa aggggatgtg agggcctcca ctgaagcagg gaggcagctg  
3780  
tgtaatccta tgtcagctct cttaggaagc cccagtactt atattgggca tgcacttgcc  
3840  
cttaaaaaca atgatttgtg agtccaggaa caatttacta tttttaaatt attttgctgc  
3900

ttctgttctg ggtctgaatt cctttttgtg ccagatgccca gtactgtctg cccattggct  
 3960  
 ccaggggctg tatgggcaga ttcagtctcc agaggggtatt cagatcatct gcttctttga  
 4020  
 aggagtaaatt gtgttttgggt cctagggccca gaggagcttg tcttccttgt cctctgttcc  
 4080  
 caccctcccc tgaacagaac ccagcccata agagacattc tcagatgaaa ctctgttttc  
 4140  
 ttgccccagt caggtcaag ccctgtgggt gtaggaataa agcctgtgat ctcaaaaaaa  
 4200  
 aaaaaaaaaa aaaaaaa  
 4217

<210> 5354

<211> 605

<212> PRT

<213> Homo sapiens

<400> 5354

Met	Lys	Gly	Ala	Thr	Thr	Asn	Ile	Cys	Tyr	Asn	Val	Leu	Asp	Arg	Asn
1				5					10					15	
Val	His	Glu	Lys	Lys	Leu	Gly	Asp	Lys	Val	Ala	Phe	Tyr	Trp	Glu	Gly
			20					25					30		
Asn	Glu	Pro	Gly	Glu	Thr	Thr	Gln	Ile	Thr	Tyr	His	Gln	Leu	Leu	Val
	35						40					45			
Gln	Val	Cys	Gln	Phe	Ser	Asn	Val	Leu	Arg	Lys	Gln	Gly	Ile	Gln	Lys
	50					55					60				
Gly	Asp	Arg	Val	Ala	Ile	Tyr	Met	Pro	Met	Ile	Pro	Glu	Leu	Val	Val
65					70					75				80	
Ala	Met	Leu	Ala	Cys	Ala	Arg	Ile	Gly	Ala	Leu	His	Ser	Ile	Val	Phe
			85						90					95	
Ala	Gly	Phe	Ser	Ser	Glu	Ser	Leu	Cys	Glu	Arg	Ile	Leu	Asp	Ser	Ser
			100					105					110		
Cys	Ser	Leu	Leu	Ile	Thr	Thr	Asp	Ala	Phe	Tyr	Arg	Gly	Glu	Lys	Leu
	115						120					125			
Val	Asn	Leu	Lys	Glu	Leu	Ala	Asp	Glu	Ala	Leu	Gln	Lys	Cys	Gln	Glu
	130					135					140				
Lys	Gly	Phe	Pro	Val	Arg	Cys	Cys	Ile	Val	Val	Lys	His	Leu	Gly	Arg
145					150					155				160	
Ala	Glu	Leu	Gly	Met	Gly	Thr	Pro	Pro	Ala	Ser	Pro	Pro	Gln	Leu	Arg
			165						170					175	
Gly	His	Ala	Asp	Val	Gln	Ile	Ser	Trp	Asn	Gln	Gly	Ile	Asp	Leu	Trp
	180							185					190		
Trp	His	Glu	Leu	Met	Gln	Glu	Ala	Gly	Asp	Glu	Cys	Glu	Pro	Glu	Trp
	195						200					205			
Cys	Asp	Ala	Glu	Asp	Pro	Leu	Phe	Ile	Leu	Tyr	Thr	Ser	Gly	Ser	Thr
	210					215					220				
Gly	Lys	Pro	Lys	Gly	Val	Val	His	Thr	Val	Gly	Gly	Tyr	Met	Leu	Tyr
225					230					235				240	
Val	Ala	Thr	Thr	Phe	Lys	Tyr	Val	Phe	Asp	Phe	His	Ala	Glu	Asp	Val
			245						250					255	
Phe	Trp	Cys	Thr	Ala	Asp	Ile	Gly	Trp	Ile	Thr	Gly	His	Ser	Tyr	Val
			260					265					270		
Thr	Tyr	Gly	Pro	Leu	Ala	Asn	Gly	Ala	Thr	Ser	Val	Leu	Phe	Glu	Gly

275	280	285
Ile Pro Thr Tyr Pro Asp Val Asn Arg Leu Trp Ser Ile Val Asp Lys		
290	295	300
Tyr Lys Val Thr Lys Phe Tyr Thr Ala Pro Thr Ala Ile Arg Leu Leu		
305	310	315
Met Lys Phe Gly Asp Glu Pro Val Thr Lys His Ser Arg Ala Ser Leu		
	325	330
Gln Val Leu Gly Thr Val Gly Glu Pro Ile Asn Pro Glu Ala Trp Leu		
	340	345
Trp Tyr His Arg Val Val Gly Ala Gln Arg Cys Pro Ile Val Asp Thr		
	355	360
Phe Trp Gln Thr Glu Thr Gly Gly His Met Leu Thr Pro Leu Pro Val		
	370	375
Pro Thr Pro Met Lys Pro Gly Ser Ala Thr Phe Pro Phe Phe Gly Val		
385	390	395
Ala Pro Ala Ile Leu Asn Glu Ser Gly Glu Glu Leu Glu Gly Glu Ala		
	405	410
Glu Gly Tyr Leu Val Phe Lys Gln Pro Trp Pro Gly Ile Met Arg Thr		
	420	425
Val Tyr Gly Asn His Glu Arg Phe Glu Thr Thr Tyr Ser Lys Lys Phe		
	435	440
Pro Gly Tyr Tyr Val Thr Gly Asp Gly Cys Gln Arg Asp Gln Asp Gly		
	450	455
Tyr Tyr Trp Ile Thr Gly Arg Ile Asp Asp Met Leu Asn Val Ser Gly		
465	470	475
His Leu Leu Ser Thr Ala Glu Val Glu Ser Ala Leu Val Glu His Glu		
	485	490
Ala Val Ala Glu Ala Ala Val Val Gly His Pro His Pro Val Lys Gly		
	500	505
Glu Cys Leu Tyr Cys Phe Val Thr Leu Cys Asp Gly His Thr Phe Ser		
	515	520
Pro Lys Leu Thr Glu Glu Leu Lys Lys Gln Ile Arg Glu Lys Ile Gly		
	530	535
Pro Ile Ala Thr Pro Asp Tyr Ile Gln Asn Ala Pro Gly Leu Pro Lys		
545	550	555
Thr Arg Ser Gly Lys Ile Met Arg Arg Val Leu Arg Lys Ile Ala Gln		
	565	570
Asn Asp His Asp Leu Gly Asp Met Ser Thr Val Ala Asp Pro Ser Val		
	580	585
Ile Ser His Leu Phe Ser His Arg Cys Leu Thr Ile Gln		
	595	600

&lt;210&gt; 5355

&lt;211&gt; 1596

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5355

agaaagtgc tagaatgt gatccacttt gcctgggaag agaagctctt tctcctggct  
 60  
 gatgaggtgt accaggacaa cgtgtactct ccagattgca gattccactc cttcaagaag  
 120  
 gtgctgtacg agatggggcc cgagtactcg agtaatgtgg agcttgctc cttccactcc  
 180

acctccaagg gctacatggg cgaatgcggc tacagaggag gctacatgga ggtgggtcaat  
240  
ttgcaccccg agatcaaggg ccagctggtg aagctgctgt cgggtgcgct gtgccccca  
300  
gtgtctgggc aggccgcgat ggacattgtt gtgaaccccc cgggtggcagg agaggagtcc  
360  
tttgagcaat tcagccgaga gaaggagtgc gtcctgggta atctggccaa aaaagcaaag  
420  
ctgacggaag acctgtttaa ccaagtccca ggaattcact gcaaccctt gcagggggcc  
480  
atgtacgct tccctcgat cttcattcct gccaaagctg tggaggctgc tcaggcccat  
540  
caaatggctc cagacatgtt ctactgcatg aagctcctgg aggagactgg catctgtgtc  
600  
gtgcccggca gtggcttttg gcagagggaa ggcacttacc acttcaggat gactatcctc  
660  
cctccagtgg agaagctgaa aacgggtgctg cagaaggatga aagacttcca catcaacttc  
720  
ctggagaagt acgctgagg acgctgagc cccagcggga gacctgtcct tggctcttcc  
780  
tcccaatgcc cgtcaggctg aactgcctc ccccgtagt ctgcctcggg cctcgagag  
840  
gccgtggtc acttcgtcat cattttgccc ctggagacgt ctttcttgt gccttgatgt  
900  
tgagagcgcc tctcttttga gcaaacaagc attctatatg caaccagagt agaggggacc  
960  
tgctcagcag gtgtgaccag ggttctctga atctgttatt gtttttgctt ctggaaagt  
1020  
catttggggg ttacaacaac taggatgtgt tgggtgagat gtttcagatc tggagaaatg  
1080  
agcaggtgtc gggaaatgtg tgacttaacc gtggtgaggg ctggaaatcc aaactcacca  
1140  
ccatgatctg tgaataaag cccttagcgg tgtgaagcat ccggtcctt gaacagaagg  
1200  
gcctggaagg cccctggggc tgagaaaggg tccgcccgtt ggcttgagg caggcgccgg  
1260  
gagcgagta gcacgtggac tgggcaggat gttgcactag cttggggtag atgctggggg  
1320  
ctgcggccac ggtcagaggg cccactgtg aggcgtgggt gtgagccagg ctgcaggagg  
1380  
aactgggct ccgcttccca gcaacgcagc caggcctgag aattctgtgc gcccgcggg  
1440  
ctttgggaat gaggggttcc cttgaacatg cgtaggctgg aacccgtct gagaggctc  
1500  
cctgaatttc agtgacacat agtgacgccc ggcagtgtcc cacttccgtg gagagagccg  
1560  
ctggaatggt gtggacccat cccgcgggtg accggt  
1596

&lt;210&gt; 5356

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 5356

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu  
 1 5 10 15  
 Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp  
 20 25 30  
 Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu  
 35 40 45  
 Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly  
 50 55 60  
 Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Val Asn  
 65 70 75 80  
 Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg  
 85 90 95  
 Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn  
 100 105 110  
 Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys  
 115 120 125  
 Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp  
 130 135 140  
 Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala  
 145 150 155 160  
 Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala  
 165 170 175  
 Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu  
 180 185 190  
 Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln  
 195 200 205  
 Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu  
 210 215 220  
 Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe  
 225 230 235 240  
 Leu Glu Lys Tyr Ala  
 245

&lt;210&gt; 5357

&lt;211&gt; 1722

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5357

agtgggatct gtcggcttgt caggtggtgg aggaaaaggc gtcctgcat ggggatccag  
 60  
 acgagccccc tctgtctggc ctccctgggg gtggggtgg tctctctgct cgccctggct  
 120  
 gtgggctcct acttggttcg gaggtccgc cggcctcagg tctctctcct ggaccccaat  
 180  
 gaaaagtacc tgctacgact gctagacaag acgactgtga gccacaacac caagagggtc  
 240  
 cgctttgccc tgcccaccgc ccaccacact ctggggctgc ctgtgggcaa acatatctac  
 300  
 ctctccacc gaattgatgg cagcctggtc atcaggccat acactcctgt caccagtgt  
 360  
 gaggatcaag gctatgtgga tctgtctatc aaggtctacc tgaagggtgt gcaccccaaa  
 420

tttctgagg gaggaagat gtctcagtac ctggatagcc tgaagggttg ggatgtggtg  
480  
gagtttcggg ggccaagcgg gttgtcact tacactggaa aagggcattt taacattcag  
540  
cccaacaaga aatctccacc agaaccocga gtggcgaaga aactgggaat gattgccggc  
600  
gggacaggaa tcacccaat gctacagctg atccgggcca tcctgaaagt cctgaagat  
660  
ccaaccagtg gctttctgct ttttgccaac cagacagaaa aggatatcat cttgctggag  
720  
gacttagagg aactgcaggc ccgctatccc aatcgcttta agctctgggt cactctggat  
780  
catcccccac aagattgggc ctacagcaag ggctttgtga ctgccgacat gatccgggaa  
840  
cacctgcccg ctccagggga tgatgtgctg gtactgcttt gtgggccacc ccaatgggtg  
900  
cagctggcct gccatcccaa cttggacaaa ctgggctact cacaaaagat gcgattcacc  
960  
tactgagcat cctccagctt cctgggtgct gttcgtgca gttgttcccc atcagtactc  
1020  
aagcactata agccttagat tcctttcttc agagtttcag gttttttcag ttacatctag  
1080  
agctgaaatc tggatagtac ctgcaggaa aatattcctg tagccatgga agagggccaa  
1140  
ggctcagtc ctccttgat ggccctctaa atctcccgt ggcaacaggc ccaggagagg  
1200  
cccatggagc agtctcttcc atggagtaag aaggaaggga gcatgtacgc ttggtccaag  
1260  
attggctagt tccttgatag catcttactc tcaccttctt tgtgtctgtg atgaaaggaa  
1320  
cagtctgtgc aatgggtttt acttaaaact cactgttcaa cctatgagca aatctgtatg  
1380  
tgtgagtata agttgagcat agcatactc cagaggtggt cttatggaga tggcaagaaa  
1440  
ggaggaaatg atttcttcag atctcaaagg agtctgaaat atcatatttc tgtgtgtgtc  
1500  
tctctcagcc cctgcccagg ctagagggaa acagctactg ataatcgaaa actgctgttt  
1560  
gtggcaggaa cccctggctg tgcaataaaa tggggctgag gccctgtgt gatattgaaa  
1620  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1680  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
1722

&lt;210&gt; 5358

&lt;211&gt; 321

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5358

Ser Gly Ile Cys Arg Leu Val Arg Trp Trp Arg Lys Arg Arg Ser Val

1

5

10

15

Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly

20 25 30  
 Leu Val Thr Leu Leu Gly Leu Ala Val Gly Ser Tyr Leu Val Arg Arg  
 35 40 45  
 Ser Arg Arg Pro Gln Val Thr Leu Leu Asp Pro Asn Glu Lys Tyr Leu  
 50 55 60  
 Leu Arg Leu Leu Asp Lys Thr Thr Val Ser His Asn Thr Lys Arg Phe  
 65 70 75 80  
 Arg Phe Ala Leu Pro Thr Ala His His Thr Leu Gly Leu Pro Val Gly  
 85 90 95  
 Lys His Ile Tyr Leu Ser Thr Arg Ile Asp Gly Ser Leu Val Ile Arg  
 100 105 110  
 Pro Tyr Thr Pro Val Thr Ser Asp Glu Asp Gln Gly Tyr Val Asp Leu  
 115 120 125  
 Val Ile Lys Val Tyr Leu Lys Gly Val His Pro Lys Phe Pro Glu Gly  
 130 135 140  
 Gly Lys Met Ser Gln Tyr Leu Asp Ser Leu Lys Val Gly Asp Val Val  
 145 150 155 160  
 Glu Phe Arg Gly Pro Ser Gly Leu Leu Thr Tyr Thr Gly Lys Gly His  
 165 170 175  
 Phe Asn Ile Gln Pro Asn Lys Lys Ser Pro Pro Glu Pro Arg Val Ala  
 180 185 190  
 Lys Lys Leu Gly Met Ile Ala Gly Gly Thr Gly Ile Thr Pro Met Leu  
 195 200 205  
 Gln Leu Ile Arg Ala Ile Leu Lys Val Pro Glu Asp Pro Thr Gln Cys  
 210 215 220  
 Phe Leu Leu Phe Ala Asn Gln Thr Glu Lys Asp Ile Ile Leu Arg Glu  
 225 230 235 240  
 Asp Leu Glu Glu Leu Gln Ala Arg Tyr Pro Asn Arg Phe Lys Leu Trp  
 245 250 255  
 Phe Thr Leu Asp His Pro Pro Lys Asp Trp Ala Tyr Ser Lys Gly Phe  
 260 265 270  
 Val Thr Ala Asp Met Ile Arg Glu His Leu Pro Ala Pro Gly Asp Asp  
 275 280 285  
 Val Leu Val Leu Leu Cys Gly Pro Pro Pro Met Val Gln Leu Ala Cys  
 290 295 300  
 His Pro Asn Leu Asp Lys Leu Gly Tyr Ser Gln Lys Met Arg Phe Thr  
 305 310 315 320  
 Tyr

&lt;210&gt; 5359

&lt;211&gt; 5003

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5359

ncgccggcg gtacgggggt ggtgccgcgc tcttgcccc gcgcgggagg acggcgagg  
 60  
 cgctccag cctgctatgg gatggatgaa gaagagaacc actatgtctc gcagctcagg  
 120  
 gaagtctaca gcagctgcca caccacgggg actggcttctc tggaccgcca ggagctgacc  
 180  
 cagctctgcc ttaagttca cctggagcag cagctgccc tctctctgca gacgttctc  
 240

ggaaacgacc atttcgccag ggttaacttt gaggaattta aggaaggttt tgtggctgtg  
300  
ttgtcttcaa atgctgggtg tgcacctca gatgaagaca gtagttcttt ggaatcagct  
360  
gcctccagtg ccatccctcc aaagtatgtg aatggttcta agtggatgg ccgtcggagc  
420  
cggcctgagc tatgtgacgc tgccacagaa gccagacgcg tgccggagca gcaaaccag  
480  
gccagcctga aaagtacact ctggcgctca gcgtctctgg agagcgtgga gagtcccaag  
540  
tcagatgaag aggccgagag cactaaagaa gctcagaatg aattatttga agcacaagga  
600  
cagctgcaga cctgggattc tgaggacttt gggagcccc agaagtcctg cagccctcc  
660  
tttgacacc cagagagcca gatccggggc gtgtgggaag agctgggggt gggcagcagc  
720  
ggacacctga gcgagcagga gctggctgtg gtctgccaga gcgtcgggct ccagggactc  
780  
gagaaagagg aactcgaaga cctgtttaac aaactggatc aagacggaga cggcaaagtg  
840  
agtcttgagg aattccagct tggcctcttc agtcatgagc ccgcgctact tctagagtct  
900  
tccactcggg ttaaaccgag caaggcttgg tctcattacc aggtcccaga ggagagcggc  
960  
tgccacacca ccacaacctc atccctcgtg tccctgtgct ccagcctgcg cctcttctcc  
1020  
agcattgacg atggttctgg cttecgctttt cctgatcagg tectggccat gtggaccag  
1080  
gaggggattc agaatggcag ggagatcttg cagagcctgg acttcagcgt ggacgagaag  
1140  
gtgaaccttc tggagctgac ctgggccctt gacaacgagc tcatgacagt ggacagtgcc  
1200  
gtccagcagg cagccctggc ctgctaccac caggagctga gctaccagca agggcaggtg  
1260  
gagcagctgg caaggagcgc tgacaaggca aggcaggacc tggagagggc cgagaagagg  
1320  
aacctggagt ttgtgaaaga gatggacgac tgccactcca ccctggagca gctcacggag  
1380  
aagaaaatca agcatctgga gcaggggtac cgggaaaggc tgagcctcct gcggtctgag  
1440  
gtggaggcgg agcgagagct gttctgggag caggcccaca ggcagagggc cgcgctggag  
1500  
tgggacgtgg ggcgcctgca ggctgaggag gctggcctcc gcgagaagct gacctggcc  
1560  
ctgaaggaaa acagtgcct acagaaggag attgtggaag tgggtggaaa gctttcggat  
1620  
tcggagaggc tggccctgaa gctgcagaag gacctggagt ttgtgctgaa ggacaagctg  
1680  
gagccacaga gtgcagagct cctggcccag gaggagcggc tcgcagcagt cctgaaggaa  
1740  
tacgagctca agtgccggga cctgcaggac cgcaacgatg agctgcaagc tgagctggaa  
1800  
ggcctgtggg cgcggctgcc caagaaccgg cacagccct catggagccc ggatgggcgc  
1860

agacggcagc tccctggact cggcccagca ggcatttcat tcttgggtaa ttctgtccca  
1920  
gtgagtatag aaacggagct gatgatggag caggtaaagg agcattacca agacctcagg  
1980  
accagctgg agaccaaggt aaattactac gaaagggaaa ttgcggcact gaaaaggaac  
2040  
tttgagaagg agaggaagga catggagcag gctcgcaggc gcgaggtcag cgtgctggag  
2100  
ggtcagaagg ccgacctgga ggagctccac gagaagtctc aggaggtcat ctggggcctg  
2160  
caggagcagc tgcaggacac agcccgcggc cccgagcctg agcagatggg cctggcaccc  
2220  
tgctgcaccc aggcactgtg tggcctggcc ctgcggcatc acagccacct gcagcagatc  
2280  
aggagagagg ctgaggcgga gctgagtgga gagctgtcgg ggctgggagc cctgcccgt  
2340  
cgagagacc tgaccttgga gctggaggag ccgcccagc gacccctgcc acgcgggagc  
2400  
cagaggtcgg agcagctgga gctggagagg gcactgaagc tgcagccctg tgcgagcgag  
2460  
aagcgcgccc agatgtgct atcgttggcc ctgaggagg aggagtggga gcttggccgc  
2520  
gggaagcgag tggacgggccc ctccctggaa gcagagatgc aggcctgcc gaaagatggg  
2580  
ctggtggcag gaagtggcca ggagggcaca cgtggcctcc taccactgag tccgggctgt  
2640  
ggggagcggc cactggcctg gctggcccca ggtgatggca gagagtctga ggaggcgga  
2700  
ggagccgggc ctgcgccag gcaagcccag gacacagaag ctacgcagag cccggccccc  
2760  
gcccctgccc cggcatccca cggccctca gagaggtggt cacgcattga gccctgtgga  
2820  
gtggatgggg atattgtccc aaaggagcca gaggcttctg gcgcgagcgc agcggggctg  
2880  
gagcagcctg gagcccgga gctgcctctg ctgggaacag agagagacgc ctgcgaaacc  
2940  
cagccacgga tgtgggagcc acccctgagg ccggccgctt cgtgcagggg acaggctgag  
3000  
aggctacagg ccattcagga agagcgagca cgaagctgga gcaggggcac ccaggagcag  
3060  
gcctcggagc agcaggcccc ggccgagggc gccctggagc ctgggtgtca caagcacagt  
3120  
gtggagggtt ccaggagagg gtccttgcca tccacctcc agctcgcaga cccgcagggt  
3180  
tcttggcagg agcagcttgc tgccccagaa gagggggaga ccaaatagc gctggagaga  
3240  
gagaaggatg acatggaaac caaacttcta catctggaag acgtcgtccg ggctctggag  
3300  
aaacatgtag atttgagaga gaacgacaga ctggagttcc atagacttcc tgaagaaaac  
3360  
actttgttga aaaacgatct ggaaggggtt cggcaagagc ttgaagctgc agaaagtact  
3420  
cacgatgcac agaggaagga aattgaggtt ttaaagaaag acaaggaaaa ggctgctct  
3480

gagatggagg tgetcaacag acagaatcag aactacaagg atcaattatc ccagctcaat  
3540  
gtcagggttc ttcaactggg acaggaggct tctaccacc aggcccaaaa cgaggagcat  
3600  
cgtgtgacca ttcagatggt aacacagagc ctggaggagg tggttcgag tgggcagcag  
3660  
cagagtgacc aaatccaaaa acttagaggt gaacttgaat gcctgaatca ggaacatcag  
3720  
agcctgcage tgccatggc agagctgacc cagacccttg aggaaagtca agaccaggtg  
3780  
cagggagctc acctgaggct gaggcaggcc caggcccagc acttgacagga ggtccggctg  
3840  
gtgccccagg accgtgtggc cgagctgcat cgcttgcctca gccttcaggg agagcaggcc  
3900  
aggaggcgcc tggatgcaca gcgggaagaa catgagaaac agctgaaagc cacagaagag  
3960  
cgggtggaag aggcggagat gattctgaag aatatggaaa tgctcctcca agagaaagt  
4020  
gataagctga aggagcagtt tgaaaagaac acgaagtccg acctgctgct gaaggagctg  
4080  
tacgtggaga acgcccacct ggtgagagca cttcaggcca ccgaggagaa gcagcgaggc  
4140  
gccgagaaac aaagccgct cttggaagaa aaagttcgcg ctctcaacaa actcgtcagt  
4200  
aggattgccc ccgcagccct ctctgtgtaa agacagatta ttttctagga ttcattcgaa  
4260  
agcacatctt ttaaattaag ccactgtgct gccttagatt ccgtgggtca tgagccatga  
4320  
gtcctgggac atctgaggat tgggattctt tgttcacccc gcagatagtt aatgaatggt  
4380  
ctgccctggg caagatggag gtgggggctg ggggaatatg catgttgag aagccggcgt  
4440  
ttttattagc ggtcctgagt aatttccctt ggcaaaattc ccagttttgc cactctctgg  
4500  
agccagatcc tgggagctgt cagcaaggag caggtaagt agcagttatg gacagcactt  
4560  
tccatgtggt gttccgacc ctggctgtca gagtgaatg taaagtcagg gctctgtaca  
4620  
gttttgccat ttcactgttc tgctttaagc ttagcttatt agaactcttg gtggagggtg  
4680  
cgtacacaca ttccagaaaa ggcttcactc gctgggaacg tcaaccagc gagaaaggag  
4740  
gggaagcccc ttctccggg accttatctg tggactcagg aatgatggtg tttattgcaa  
4800  
atgcacaatc tttttcccat tgaaatgtca tcacactgga aattgtacta tatgtaaaaa  
4860  
aaaaaaaaa gtatagtttt atatttgaaa tgtatgcaaa ttatggccat atggctgatt  
4920  
ggaatgtact actgtaatat aaaaagtcac tgtatttgca ataaattctt ttctattaaa  
4980  
attgaaaaaa aaaaaaaaaa aaa  
5003

&lt;210&gt; 5360

&lt;211&gt; 1406

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5360

Gly Thr Gly Val Val Pro Arg Ser Trp Pro Arg Ala Gly Gly Arg Arg  
 1 5 10 15  
 Arg Arg Leu Pro Ala Cys Tyr Gly Met Asp Glu Glu Glu Asn His Tyr  
 20 25 30  
 Val Ser Gln Leu Arg Glu Val Tyr Ser Ser Cys Asp Thr Thr Gly Thr  
 35 40 45  
 Gly Phe Leu Asp Arg Gln Glu Leu Thr Gln Leu Cys Leu Lys Leu His  
 50 55 60  
 Leu Glu Gln Gln Leu Pro Val Leu Leu Gln Thr Leu Leu Gly Asn Asp  
 65 70 75 80  
 His Phe Ala Arg Val Asn Phe Glu Glu Phe Lys Glu Gly Phe Val Ala  
 85 90 95  
 Val Leu Ser Ser Asn Ala Gly Val Arg Pro Ser Asp Glu Asp Ser Ser  
 100 105 110  
 Ser Leu Glu Ser Ala Ala Ser Ser Ala Ile Pro Pro Lys Tyr Val Asn  
 115 120 125  
 Gly Ser Lys Trp Tyr Gly Arg Arg Ser Arg Pro Glu Leu Cys Asp Ala  
 130 135 140  
 Ala Thr Glu Ala Arg Arg Val Pro Glu Gln Gln Thr Gln Ala Ser Leu  
 145 150 155 160  
 Lys Ser His Leu Trp Arg Ser Ala Ser Leu Glu Ser Val Glu Ser Pro  
 165 170 175  
 Lys Ser Asp Glu Glu Ala Glu Ser Thr Lys Glu Ala Gln Asn Glu Leu  
 180 185 190  
 Phe Glu Ala Gln Gly Gln Leu Gln Thr Trp Asp Ser Glu Asp Phe Gly  
 195 200 205  
 Ser Pro Gln Lys Ser Cys Ser Pro Ser Phe Asp Thr Pro Glu Ser Gln  
 210 215 220  
 Ile Arg Gly Val Trp Glu Glu Leu Gly Val Gly Ser Ser Gly His Leu  
 225 230 235 240  
 Ser Glu Gln Glu Leu Ala Val Val Cys Gln Ser Val Gly Leu Gln Gly  
 245 250 255  
 Leu Glu Lys Glu Glu Leu Glu Asp Leu Phe Asn Lys Leu Asp Gln Asp  
 260 265 270  
 Gly Asp Gly Lys Val Ser Leu Glu Glu Phe Gln Leu Gly Leu Phe Ser  
 275 280 285  
 His Glu Pro Ala Leu Leu Leu Glu Ser Ser Thr Arg Val Lys Pro Ser  
 290 295 300  
 Lys Ala Trp Ser His Tyr Gln Val Pro Glu Glu Ser Gly Cys His Thr  
 305 310 315 320  
 Thr Thr Thr Ser Ser Leu Val Ser Leu Cys Ser Ser Leu Arg Leu Phe  
 325 330 335  
 Ser Ser Ile Asp Asp Gly Ser Gly Phe Ala Phe Pro Asp Gln Val Leu  
 340 345 350  
 Ala Met Trp Thr Gln Glu Gly Ile Gln Asn Gly Arg Glu Ile Leu Gln  
 355 360 365  
 Ser Leu Asp Phe Ser Val Asp Glu Lys Val Asn Leu Leu Glu Leu Thr  
 370 375 380  
 Trp Ala Leu Asp Asn Glu Leu Met Thr Val Asp Ser Ala Val Gln Gln

385 390 395 400  
 Ala Ala Leu Ala Cys Tyr His Gln Glu Leu Ser Tyr Gln Gln Gly Gln  
 405 410 415  
 Val Glu Gln Leu Ala Arg Glu Arg Asp Lys Ala Arg Gln Asp Leu Glu  
 420 425 430  
 Arg Ala Glu Lys Arg Asn Leu Glu Phe Val Lys Glu Met Asp Asp Cys  
 435 440 445  
 His Ser Thr Leu Glu Gln Leu Thr Glu Lys Lys Ile Lys His Leu Glu  
 450 455 460  
 Gln Gly Tyr Arg Glu Arg Leu Ser Leu Leu Arg Ser Glu Val Glu Ala  
 465 470 475 480  
 Glu Arg Glu Leu Phe Trp Glu Gln Ala His Arg Gln Arg Ala Ala Leu  
 485 490 495  
 Glu Trp Asp Val Gly Arg Leu Gln Ala Glu Glu Ala Gly Leu Arg Glu  
 500 505 510  
 Lys Leu Thr Leu Ala Leu Lys Glu Asn Ser Arg Leu Gln Lys Glu Ile  
 515 520 525  
 Val Glu Val Val Glu Lys Leu Ser Asp Ser Glu Arg Leu Ala Leu Lys  
 530 535 540  
 Leu Gln Lys Asp Leu Glu Phe Val Leu Lys Asp Lys Leu Glu Pro Gln  
 545 550 555 560  
 Ser Ala Glu Leu Leu Ala Gln Glu Glu Arg Phe Ala Ala Val Leu Lys  
 565 570 575  
 Glu Tyr Glu Leu Lys Cys Arg Asp Leu Gln Asp Arg Asn Asp Glu Leu  
 580 585 590  
 Gln Ala Glu Leu Glu Gly Leu Trp Ala Arg Leu Pro Lys Asn Arg His  
 595 600 605  
 Ser Pro Ser Trp Ser Pro Asp Gly Arg Arg Arg Gln Leu Pro Gly Leu  
 610 615 620  
 Gly Pro Ala Gly Ile Ser Phe Leu Gly Asn Ser Ala Pro Val Ser Ile  
 625 630 635 640  
 Glu Thr Glu Leu Met Met Glu Gln Val Lys Glu His Tyr Gln Asp Leu  
 645 650 655  
 Arg Thr Gln Leu Glu Thr Lys Val Asn Tyr Tyr Glu Arg Glu Ile Ala  
 660 665 670  
 Ala Leu Lys Arg Asn Phe Glu Lys Glu Arg Lys Asp Met Glu Gln Ala  
 675 680 685  
 Arg Arg Arg Glu Val Ser Val Leu Glu Gly Gln Lys Ala Asp Leu Glu  
 690 695 700  
 Glu Leu His Glu Lys Ser Gln Glu Val Ile Trp Gly Leu Gln Glu Gln  
 705 710 715 720  
 Leu Gln Asp Thr Ala Arg Gly Pro Glu Pro Glu Gln Met Gly Leu Ala  
 725 730 735  
 Pro Cys Cys Thr Gln Ala Leu Cys Gly Leu Ala Leu Arg His His Ser  
 740 745 750  
 His Leu Gln Gln Ile Arg Arg Glu Ala Glu Ala Glu Leu Ser Gly Glu  
 755 760 765  
 Leu Ser Gly Leu Gly Ala Leu Pro Ala Arg Arg Asp Leu Thr Leu Glu  
 770 775 780  
 Leu Glu Glu Pro Pro Gln Gly Pro Leu Pro Arg Gly Ser Gln Arg Ser  
 785 790 795 800  
 Glu Gln Leu Glu Leu Glu Arg Ala Leu Lys Leu Gln Pro Cys Ala Ser  
 805 810 815  
 Glu Lys Arg Ala Gln Met Cys Val Ser Leu Ala Leu Glu Glu Glu Glu



4541

1250 1255 1260  
 Arg Gln Ala Gln Ala Gln His Leu Gln Glu Val Arg Leu Val Pro Gln  
 1265 1270 1275 1280  
 Asp Arg Val Ala Glu Leu His Arg Leu Leu Ser Leu Gln Gly Glu Gln  
 1285 1290 1295  
 Ala Arg Arg Arg Leu Asp Ala Gln Arg Glu Glu His Glu Lys Gln Leu  
 1300 1305 1310  
 Lys Ala Thr Glu Glu Arg Val Glu Glu Ala Glu Met Ile Leu Lys Asn  
 1315 1320 1325  
 Met Glu Met Leu Leu Gln Glu Lys Val Asp Lys Leu Lys Glu Gln Phe  
 1330 1335 1340  
 Glu Lys Asn Thr Lys Ser Asp Leu Leu Leu Lys Glu Leu Tyr Val Glu  
 1345 1350 1355 1360  
 Asn Ala His Leu Val Arg Ala Leu Gln Ala Thr Glu Glu Lys Gln Arg  
 1365 1370 1375  
 Gly Ala Glu Lys Gln Ser Arg Leu Leu Glu Glu Lys Val Arg Ala Leu  
 1380 1385 1390  
 Asn Lys Leu Val Ser Arg Ile Ala Pro Ala Ala Leu Ser Val  
 1395 1400 1405

<210> 5361  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 5361  
 nngaattcct ctccaaagca gagtacgtca agttttccct ggtgtcagac agcatttcac  
 60  
 catgaaaccc taagacctgc ctctgggct ccttcagct ggtgggctg gtgtgaagg  
 120  
 gggcttcctg ggctccggc agatggagga tggcattaaa tgccaacaca gtcagcttac  
 180  
 catccacaag gccagcagct gccaacagct gccctagacc tatcaacaag acaacttcat  
 240  
 ggctcccaat gggaatggag gctgggccc cctacttag agcaggggaa agaacttttc  
 300  
 cctcaaagag cgggggcagg atgccagaat ctaactacat cctctcccgg tttgcagttc  
 360  
 taggaagtgg aatttgctgc cctaggcgtg gtctaaagga caagtttaga aatgattcaa  
 420  
 ctcaagttcc taaacagagt aagtgccagt tgatgtccca ccgtggatcc tttactocag  
 480  
 aaaaattgta atgatggctc ggccaccgcc ttggctagag tccactgca cgcgtgtcgt  
 540  
 gagggccgat gggcaagtcc gtccggtttt tttgttggt gttgttggt tttgagatgg  
 600  
 agtctcgccc tgnttgccc gactgaagtg caaaggcccg atctcaactc actgcaacct  
 660  
 ccgcctcctg ggttcaaagg attctcctgt ctcagcctcc tgagtagctg ggattacagg  
 720  
 caccgccag caccgccagc tttttttgt attttagta gagacggggt tttatcatgt  
 780  
 tggccaggct ggtctcgaac gcctgacctc atgnnatcca cccgccttgg cctcccaaat  
 840

tgctgggacc acaggcgtga gccaccgcgc ccggccgtct gtctgggttt caaaccaatc  
 900  
 aatgaacccg taagcctctt tggtatatat aacaatgaaa aaattcatta agccatgaaa  
 960  
 tctagaaata agtcatatct ctgagttgat aaaatgcttt tctgaacata catttttaggt  
 1020  
 atctgggcgt gctggcgggt gcctgtaatc ccagctactc ggggaggctt gagacagggg  
 1080

<210> 5362

<211> 165

<212> PRT

<213> Homo sapiens

<400> 5362

Cys	Pro	Thr	Val	Asp	Pro	Leu	Leu	Gln	Lys	Asn	Cys	Asn	Asp	Gly	Ser
1				5					10					15	
Ala	Thr	Ala	Leu	Ala	Arg	Val	Pro	Leu	His	Ala	Cys	Arg	Glu	Gly	Arg
			20					25					30		
Trp	Ala	Ser	Pro	Ser	Gly	Phe	Phe	Cys	Cys	Cys	Cys	Cys	Phe	Leu	Arg
		35				40						45			
Trp	Ser	Leu	Ala	Leu	Xaa	Ala	Gln	Thr	Glu	Val	Gln	Arg	Pro	Asp	Leu
	50					55					60				
Asn	Ser	Leu	Gln	Pro	Pro	Pro	Gly	Phe	Lys	Gly	Phe	Ser	Cys	Leu	
65					70				75					80	
Ser	Leu	Leu	Ser	Ser	Trp	Asp	Tyr	Arg	His	Pro	Pro	Ala	Arg	Pro	Ala
				85				90					95		
Phe	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Leu	Ser	Cys	Trp	Pro	Gly
			100					105					110		
Trp	Ser	Arg	Thr	Pro	Asp	Leu	Met	Xaa	Ser	Thr	Arg	Leu	Gly	Leu	Pro
		115				120						125			
Asn	Cys	Trp	Asp	His	Arg	Arg	Glu	Pro	Pro	Arg	Pro	Ala	Val	Cys	Leu
	130					135					140				
Val	Phe	Lys	Pro	Ile	Asn	Glu	Pro	Val	Ser	Leu	Phe	Gly	Ile	Tyr	Asn
145					150					155					160
Asn	Glu	Lys	Ile	His											
				165											

<210> 5363

<211> 894

<212> DNA

<213> Homo sapiens

<400> 5363

cggccggcgc gggcccttgg cgggcgggcg gtacagcccc aagcctgaga cccggacctg  
 60  
 agcatcgcag gttcagatcc cgccccgcct ggggcgaagc cgggggtggc ggcgacctcg  
 120  
 cggcgattgca ccggctctgt gacacacctc cctctgagca cttcccttgt gacaggccac  
 180  
 ttcccttgtg acaggccccag gacgaggtgg ccaggcggcc cccatggcgt ccctggtcta  
 240  
 ggcgagagaac cgctggggcg atgagtgaga acctcgacaa cgaggggccc aagccccatg  
 300

agagctgtgg ccaggagagc agcagtggcc tgagctggcc taccgtctcg gtgccccctg  
 360  
 cagccccggc agccctggag gaggtggaga aagaggggcg tggggcggct acagggcncg  
 420  
 gggcctcagc ccgggctcta cagctacatc agggatgact tgtttacctc tgagatcttt  
 480  
 aaactggagc tgcagaacgc gcctcgccac gccagcttca gcgacgtccg gcgcttctcg  
 540  
 ggccgctttg gtctgcagcc ccacaaaacc aaactctttg ggcaaccacc ctgcgccttt  
 600  
 gtgacattcc gcagcgctgc agagaggggac aaggccctgc gcgttttgca tgggtgcctc  
 660  
 tggaaaggcc gcccaactcag tgtggcctgg cccggcccaa ggccgacccc atggccagga  
 720  
 ggaggcngac agggagggtga gagtgaacca ccagtaacac gangtggccg acgtggtgac  
 780  
 ccctctatgg acagtgcctt antgctgagc agcttgagcg gaagcagctg gagtgcgagc  
 840  
 aggtgctgca gaaacnttgc ccaggaaatc gggagcacca accgtgcctt gcgt  
 894

&lt;210&gt; 5364

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5364

Ala	Ala	Leu	Pro	Ser	Arg	Cys	Pro	Leu	Gln	Pro	Arg	Gln	Pro	Trp	Arg
1				5					10					15	
Arg	Trp	Arg	Lys	Arg	Ala	Leu	Gly	Arg	Leu	Gln	Gly	Xaa	Gly	Pro	Gln
			20					25					30		
Pro	Gly	Leu	Tyr	Ser	Tyr	Ile	Arg	Asp	Asp	Leu	Phe	Thr	Ser	Glu	Ile
		35					40					45			
Phe	Lys	Leu	Glu	Leu	Gln	Asn	Ala	Pro	Arg	His	Ala	Ser	Phe	Ser	Asp
	50					55					60				
Val	Arg	Arg	Phe	Leu	Gly	Arg	Phe	Gly	Leu	Gln	Pro	His	Lys	Thr	Lys
65					70					75				80	
Leu	Phe	Gly	Gln	Pro	Pro	Cys	Ala	Phe	Val	Thr	Phe	Arg	Ser	Ala	Ala
				85					90					95	
Glu	Arg	Asp	Lys	Ala	Leu	Arg	Val	Leu	His	Gly	Ala	Leu	Trp	Lys	Gly
			100					105					110		
Arg	Pro	Leu	Ser	Val	Ala	Trp	Pro	Gly	Pro	Arg	Pro	Thr	Pro	Trp	Pro
		115					120					125			
Gly	Gly	Gly	Xaa	Gln	Glu	Gly	Glu	Ser	Glu	Pro	Pro	Val	Thr	Arg	Xaa
	130					135					140				
Gly	Arg	Arg	Gly	Asp	Pro	Ser	Met	Asp	Ser	Ala	Leu	Xaa	Leu	Ser	Ser
145				150						155				160	
Leu	Ser	Gly	Ser	Ser	Trp	Ser	Ala	Ser	Arg	Cys	Cys	Arg	Asn	Xaa	Ala
				165					170					175	
Gln	Glu	Ile	Gly	Ser	Thr	Asn	Arg	Ala	Leu	Arg					
			180						185						

&lt;210&gt; 5365

&lt;211&gt; 1824

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5365

cagcctttcc cggcagcgag cgctcggcca ggtgcactag gcgctgtgcg ggccccctt  
60  
ccccgcgagt cctcaagcg ggaacctgcc tcgtgtctcc caggagccat ggaggtgtg  
120  
gaactcgcca gaaaactgca ggaggaagct acgtgctcca tctgtctgga ttacttcaca  
180  
gacctgtga tgaccacctg tggccacaac ttctgccgag cctgcatcca gctgagctgg  
240  
gaaaaggcga ggggcaagaa ggggaggcgg aagcggaagg gtccttccc ctgccccgag  
300  
tgcagagaga tgccccgca gaggaacctg ctgccaacc ggctgctgac caaggtggcc  
360  
gagatggcgc agcagcatcc tggctctgag aagcaagacc tgtgccagga gcaccacgag  
420  
ccctcaagc ttttctgcca gaaggaccag agcccatct gtgtggtgtg caggagctcc  
480  
cgggagcacc ggctgcacag ggtgctgccc gccaggagg cagtgcaggg gtacaagtgtg  
540  
aagctggagg aggacatgga gtaccttcgg gagcagatca ccaggacagg gaatctgag  
600  
gccaggagg agcagagctt agccgagtgg cagggcaagg tgaaggagcg gagagaacgc  
660  
attgtgctgg agtttgagaa gatgaacctc tacctggtgg aagaagagca gaggtcctc  
720  
caggctctgg agacggaaga agaggagact gccagcaggc tccgggagag cgtggcctgc  
780  
ctggaccggc agggtcactc tctggagctg ctgctgctgc agctggagga gcggagcaca  
840  
caggggcccc tccagatgct gcaggacatg aaggaacccc tgagcaggaa gaacaacgtg  
900  
agtgtgcagt gccagaggt tgcccccca accagacca ggactgtgtg cagagtcccc  
960  
ggacagattg aagtgtctag aggttttcta gaggatgtgg tgctgatgc cacctccgag  
1020  
tacctctacc tctcctgta tgagagccgc cagaggcgt acctcggctc ttcgccgag  
1080  
ggcagtgggt tctgcagcaa ggaccgattt gtggcttacc cctgtgctgt gggccagacg  
1140  
gccttctect ctgggaggca ctactgggag gtgggcatga acatcaccgg ggacgcgttg  
1200  
tgggccctgg gtgtgtgag ggacaacgtg agccggaaag acagggtcct caagtcccc  
1260  
gaaaacggt tctgggtggt gcagctgtcc aaggggacca agtacttatc caccttctct  
1320  
gccctaacc cggtcatgct gatggagcct ccagccaca tgggcatctt cctggacttc  
1380  
gaagccgggg aagtgtcctt ctacagtga agcgatgggt ccacctgca cacctactcc  
1440  
caggccact tcccaggccc cctgcagcct ttcttctgcc tgggggctcc gaagtctggt  
1500

cagatgggtca tctccacagt gaccatgtgg gtgaaaggat agacacagac cgggggactc  
 1560  
 gggcactgct cctggctctg cagaagggtg gggccttctg cttactgcag gccacctgcc  
 1620  
 agggttctct ggcatcacgc tggcagccat tagacacaca ggggggttct tcaaattcta  
 1680  
 aatataattg tgattagaac tgtcaaacat taagagggtg tactgacaga tgcttcctag  
 1740  
 aggaaacttt tgaaagcccc tgcgttctga gtggaccgat ttctaaatcc atacctacac  
 1800  
 accaaaaaaa aaaaaaagtc gagc  
 1824

<210> 5366

<211> 477

<212> PRT

<213> Homo sapiens

<400> 5366

Met	Glu	Ala	Val	Glu	Leu	Ala	Arg	Lys	Leu	Gln	Glu	Glu	Ala	Thr	Cys
1				5					10					15	
Ser	Ile	Cys	Leu	Asp	Tyr	Phe	Thr	Asp	Pro	Val	Met	Thr	Thr	Cys	Gly
			20					25					30		
His	Asn	Phe	Cys	Arg	Ala	Cys	Ile	Gln	Leu	Ser	Trp	Glu	Lys	Ala	Arg
		35					40					45			
Gly	Lys	Lys	Gly	Arg	Arg	Lys	Arg	Lys	Gly	Ser	Phe	Pro	Cys	Pro	Glu
	50					55					60				
Cys	Arg	Glu	Met	Ser	Pro	Gln	Arg	Asn	Leu	Leu	Pro	Asn	Arg	Leu	Leu
65					70				75					80	
Thr	Lys	Val	Ala	Glu	Met	Ala	Gln	Gln	His	Pro	Gly	Leu	Gln	Lys	Gln
				85					90					95	
Asp	Leu	Cys	Gln	Glu	His	His	Glu	Pro	Leu	Lys	Leu	Phe	Cys	Gln	Lys
			100					105					110		
Asp	Gln	Ser	Pro	Ile	Cys	Val	Val	Cys	Arg	Glu	Ser	Arg	Glu	His	Arg
			115				120					125			
Leu	His	Arg	Val	Leu	Pro	Ala	Glu	Glu	Ala	Val	Gln	Gly	Tyr	Lys	Leu
	130					135					140				
Lys	Leu	Glu	Glu	Asp	Met	Glu	Tyr	Leu	Arg	Glu	Gln	Ile	Thr	Arg	Thr
145					150					155				160	
Gly	Asn	Leu	Gln	Ala	Arg	Glu	Glu	Gln	Ser	Leu	Ala	Glu	Trp	Gln	Gly
			165					170						175	
Lys	Val	Lys	Glu	Arg	Arg	Glu	Arg	Ile	Val	Leu	Glu	Phe	Glu	Lys	Met
			180					185					190		
Asn	Leu	Tyr	Leu	Val	Glu	Glu	Glu	Gln	Arg	Leu	Leu	Gln	Ala	Leu	Glu
		195					200					205			
Thr	Glu	Glu	Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Glu	Ser	Val	Ala	Cys
	210					215						220			
Leu	Asp	Arg	Gln	Gly	His	Ser	Leu	Glu	Leu	Leu	Leu	Gln	Leu	Glu	
225					230					235				240	
Glu	Arg	Ser	Thr	Gln	Gly	Pro	Leu	Gln	Met	Leu	Gln	Asp	Met	Lys	Glu
			245						250				255		
Pro	Leu	Ser	Arg	Lys	Asn	Asn	Val	Ser	Val	Gln	Cys	Pro	Glu	Val	Ala
			260					265					270		
Pro	Pro	Thr	Arg	Pro	Arg	Thr	Val	Cys	Arg	Val	Pro	Gly	Gln	Ile	Glu

275	280	285
Val Leu Arg Gly Phe Leu Glu Asp Val Val Pro Asp Ala Thr Ser Ala		
290	295	300
Tyr Pro Tyr Leu Leu Leu Tyr Glu Ser Arg Gln Arg Arg Tyr Leu Gly		
305	310	315
Ser Ser Pro Glu Gly Ser Gly Phe Cys Ser Lys Asp Arg Phe Val Ala		
325	330	335
Tyr Pro Cys Ala Val Gly Gln Thr Ala Phe Ser Ser Gly Arg His Tyr		
340	345	350
Trp Glu Val Gly Met Asn Ile Thr Gly Asp Ala Leu Trp Ala Leu Gly		
355	360	365
Val Cys Arg Asp Asn Val Ser Arg Lys Asp Arg Val Leu Lys Cys Pro		
370	375	380
Glu Asn Gly Phe Trp Val Val Gln Leu Ser Lys Gly Thr Lys Tyr Leu		
385	390	395
Ser Thr Phe Ser Ala Leu Thr Pro Val Met Leu Met Glu Pro Pro Ser		
405	410	415
His Met Gly Ile Phe Leu Asp Phe Glu Ala Gly Glu Val Ser Phe Tyr		
420	425	430
Ser Val Ser Asp Gly Ser His Leu His Thr Tyr Ser Gln Ala Thr Phe		
435	440	445
Pro Gly Pro Leu Gln Pro Phe Cys Leu Gly Ala Pro Lys Ser Gly		
450	455	460
Gln Met Val Ile Ser Thr Val Thr Met Trp Val Lys Gly		
465	470	475

&lt;210&gt; 5367

&lt;211&gt; 549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5367

nntcctcttc cccctcattc tcttccccct cgtcttcagg aggcgggtgg gcaggagctg  
60

ggatctcggg tggctgcatg cgtgtctcct tgggggaagt ctcgggggaa gtaggctgtg  
120

gagtctcagg ggctggggat gctgcccccg aagcccccta cttttgggga gtctctgtcc  
180

cagcaciaag ctgaggccag cagccgcaga aggagaaaga gcagtcggcc ccaggccaag  
240

gcagcgccca gggcctacag tgaccatgat gaccgctggg agacaaaaga aggggcagca  
300

tccccagccc ctgagactcc acagcctact tccccgaga cttcccccaa ggagacaccc  
360

atgcagccac ccgagatccc agctcctgcc caccggcctc ctgaagacga gggggaagag  
420

aatgaggggg aagaggatga agaattgggag gacataagtg aggatgagga agaggaggag  
480

atcgagggtg aagaaggatga tgaggaggaa ccagcccaag accaccaagc cccagaggct  
540

gccccacc  
549

&lt;210&gt; 5368

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5368

Met Leu Pro Pro Lys Pro Pro Thr Phe Gly Glu Phe Leu Ser Gln His  
1 5 10 15  
Lys Ala Glu Ala Ser Ser Arg Arg Arg Lys Ser Ser Arg Pro Gln  
20 25 30  
Ala Lys Ala Ala Pro Arg Ala Tyr Ser Asp His Asp Asp Arg Trp Glu  
35 40 45  
Thr Lys Glu Gly Ala Ala Ser Pro Ala Pro Glu Thr Pro Gln Pro Thr  
50 55 60  
Ser Pro Glu Thr Ser Pro Lys Glu Thr Pro Met Gln Pro Pro Glu Ile  
65 70 75 80  
Pro Ala Pro Ala His Arg Pro Pro Glu Asp Glu Gly Glu Glu Asn Glu  
85 90 95  
Gly Glu Glu Asp Glu Glu Trp Glu Asp Ile Ser Glu Asp Glu Glu Glu  
100 105 110  
Glu Glu Ile Glu Val Glu Glu Gly Asp Glu Glu Glu Pro Ala Gln Asp  
115 120 125  
His Gln Ala Pro Glu Ala Ala Pro Thr  
130 135

&lt;210&gt; 5369

&lt;211&gt; 646

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5369

ngggaggcgg gaggcgcggc cgccgctcca gctgcgagtc cgcccgccgc ccgcccgcgc  
60  
cgcccgccgc tcggtccgc gcccgccatg gcccgccctga cggagagcga ggcgcgcgcg  
120  
cagcagcagc agctcctgca gccgcggccc tcgcccgtgg gcagcagcgg gcccgagccc  
180  
cccggggggc agcccgcagg catgaaggac ctggacgcca tcaaactctt cgtggggccag  
240  
atcccgcggc acctggacga gaaggacctc aagccgctct tcgagcagtt cggccgcate  
300  
tacgagctca cgggtctcaa agacccttac acggggatgc acaaagggtg gcgcccggcc  
360  
cctcccccc cctccccctc cctccgctc ccacccacc ttccggcacc ttctctcccc  
420  
catcaccatc cctctctg ctaacctcct cctctgctg cctctgccg agcatcggtt  
480  
cttaccctt cctccacc caccctcct cccctctctg ggggtgcagc tgacagatcc  
540  
gagcggggcc cctccccctc tcgccccct cctccctcct cccaccttc cggcatctcc  
600  
tctctctct cctctctctc tccctctctc tctcccttc tcttct  
646

&lt;210&gt; 5370



&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5370

```

Met Lys Asp Leu Asp Ala Ile Lys Leu Phe Val Gly Gln Ile Pro Arg
 1           5           10           15
His Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Gln Phe Gly Arg
      20           25           30
Ile Tyr Glu Leu Thr Val Leu Lys Asp Pro Tyr Thr Gly Met His Lys
      35           40           45
Gly Gly Arg Pro Ala Pro Ser Pro Leu Ser Pro Ser Leu Arg Leu Pro
      50           55           60
Pro His Leu Pro Ala Ser Ser Leu Pro His His His Pro Ser Ser Ala
      65           70           75           80
His Leu Pro Pro Leu Pro Ala Ser Ala Gly Ala Ser Val Leu Thr Pro
      85           90           95
Ser Leu Pro Pro Thr Pro Pro Pro Leu Ser Gly Gly Ala Ala Asp Arg
      100          105          110
Ser Glu Arg Ala Pro Ser Pro Pro Pro Pro Pro Leu Pro Pro Ser Pro
      115          120          125
Pro Ser Gly Ile Ser Ser Leu Ser Pro Ser Leu Ser Pro Ser Leu Ser
      130          135          140
Pro Phe Leu Phe
145

```

&lt;210&gt; 5371

&lt;211&gt; 1177

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5371

```

nnacacagtg ccagcgccct catgtaccac cggaacgaga gcctacagcc cagcctgcag
60
agcccgc aaa cggagctg cg gtcggacttc cagtgcgttg tgggcttcgg gggcattcac
120
tccacgc cgt ccaactgtcct cagcgaccag gccaaagtatc taaacccctt actgggagag
180
tggaagcact tcaactgcctc cctggccccc cgcatgtcca accagggcat cgcggtgctc
240
aacaacttcg tatacttgat tggaggggac aacaatgtcc aaggatttcg agcagagtc
300
cgatgctgga ggtatgaccc acggcacaa cgcgtgnttc cagatccagt ccctgcagca
360
ggagcacgcc gacctgtcnn cgtgtgtgtt gtaggcaggt acatctacgc tgtggcgggc
420
cgtgactacc acaatgacct gaatgctgtg gagcgctacg accctgccac caactcctgg
480
gcatacgtgg cccactcaa gagggaggtg tatgccacg caggcgcgac gctggagggg
540
aagatgtata tcacctgcgg ccgcagaggg gaggattacc tgaaagagac aactgctac
600
gatccaggca gcaacacttg gcacacactg gctgatgggc ctgtgcggcg cgcttggcac
660

```

ggcattggcaa ccctcctcaa caagctgtat gtgacgggg gcagcaacaa cgatgccgga  
 720  
 tacaggaggg acgtgcacca ggtggcctgc tacagctgca cgtctggaca gtggtcatct  
 780  
 gtctgcccac tccctgctgg gcacggtag cctggcattg ctgtgctgga caacaggatc  
 840  
 tatgtgttag gtggccgctc acacaaccgc ggcagccgca caggctacgt gcacatttac  
 900  
 gatgtggaga aggactgctg ggaggaaggg cccagctgg acaactccat ctcaggcctg  
 960  
 gcggcctgtg tgctaccct gcccgcctcc ctgctccttg agccgccccg cgggaccctt  
 1020  
 gaccgcagcc aggcgcagcc ggactttgcc tctgaggtga tgagtgtgtc tgactgggag  
 1080  
 gagtttgaca actccagtga ggactaggct ccctgtgcct ggcatcagag ggaagggagg  
 1140  
 ctggggctgc agggcagtga aaccacgca gcctagg  
 1177

&lt;210&gt; 5372

&lt;211&gt; 368

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5372

Xaa	His	Ser	Ala	Ser	Ala	Leu	Met	Tyr	His	Arg	Asn	Glu	Ser	Leu	Gln
1			5						10					15	
Pro	Ser	Leu	Gln	Ser	Pro	Gln	Thr	Glu	Leu	Arg	Ser	Asp	Phe	Gln	Cys
		20						25					30		
Val	Val	Gly	Phe	Gly	Gly	Ile	His	Ser	Thr	Pro	Ser	Thr	Val	Leu	Ser
		35					40					45			
Asp	Gln	Ala	Lys	Tyr	Leu	Asn	Pro	Leu	Leu	Gly	Glu	Trp	Lys	His	Phe
	50					55				60					
Thr	Ala	Ser	Leu	Ala	Pro	Arg	Met	Ser	Asn	Gln	Gly	Ile	Ala	Val	Leu
65					70					75				80	
Asn	Asn	Phe	Val	Tyr	Leu	Ile	Gly	Gly	Asp	Asn	Asn	Val	Gln	Gly	Phe
			85					90					95		
Arg	Ala	Glu	Ser	Arg	Cys	Trp	Arg	Tyr	Asp	Pro	Arg	His	Asn	Arg	Trp
		100						105				110			
Xaa	Pro	Asp	Pro	Val	Pro	Ala	Ala	Gly	Ala	Arg	Arg	Pro	Val	Xaa	Val
		115				120						125			
Cys	Val	Val	Gly	Arg	Tyr	Ile	Tyr	Ala	Val	Ala	Gly	Arg	Asp	Tyr	His
	130					135					140				
Asn	Asp	Leu	Asn	Ala	Val	Glu	Arg	Tyr	Asp	Pro	Ala	Thr	Asn	Ser	Trp
145				150					155					160	
Ala	Tyr	Val	Ala	Pro	Leu	Lys	Arg	Glu	Val	Tyr	Ala	His	Ala	Gly	Ala
			165					170						175	
Thr	Leu	Glu	Gly	Lys	Met	Tyr	Ile	Thr	Cys	Gly	Arg	Arg	Gly	Glu	Asp
		180						185					190		
Tyr	Leu	Lys	Glu	Thr	His	Cys	Tyr	Asp	Pro	Gly	Ser	Asn	Thr	Trp	His
	195					200						205			
Thr	Leu	Ala	Asp	Gly	Pro	Val	Arg	Arg	Ala	Trp	His	Gly	Met	Ala	Thr
	210					215						220			
Leu	Leu	Asn	Lys	Leu	Tyr	Val	Ile	Gly	Gly	Ser	Asn	Asn	Asp	Ala	Gly

```
<210> 5373
<211> 4221
<212> DNA
<213> Homo sapiens
```

4551

gccatggatg gttataggcg tatttttaaac cttttgtctc catctgatgg cgaacgtttt  
960  
atgcagctgg ctagagatat ggcaaagagt tactatgaag ccaatgatgt tacttctgct  
1020  
attaacataa ttgatgaagc tttctcaaaa caccagggcc tagtctccat ggaagatgtt  
1080  
aacatagcag ctgaactata tatttctaac aaacagtatg acaaagcttt ggagataatt  
1140  
acagattttt ctggaattgt gctggaaaaa aaaacttcag aagaaggcac ctcagaagag  
1200  
aataaagctc ctgagaatgt tacctgcact atacctgatg gcgtgccaat agatatcaca  
1260  
gtgaagttga tggctctgct tgtacatctc aacattcttg aaccacttaa tctctcttg  
1320  
acaacactag tagaacagaa tcctgaagat atgggagacc tatacctaga tgttgctgaa  
1380  
gcttttctgg atgttggtga atataattct gcacttcccc tctcagtgc tcttgtttgc  
1440  
tctgaaagat acaaccttgc agtagtttgg ctctgctatg cagaatgttt aaaggcctta  
1500  
ggctatatgg agcgagctgc tgaaagctat ggcaagggtg ttgatctggc cccactccat  
1560  
ttggatgcaa ggatttcact ttctacctt cagcagcagc tgggccagcc tgagaaagct  
1620  
ctggaagctc tggaaaccaat gtatgatcca gatactttag cacaggatgc aaatgctgca  
1680  
cagcaggaac tgaagttatt gcttcatcgt tctactctgt tgttttcaca aggcaaaatg  
1740  
tatggttatg tggatacctt acttactatg ttagccatgc ttttaaaggt agcaatgaat  
1800  
cgagcccaag tttgtttgat atccagttcc aagtctggag agaggcatct ttatcttatt  
1860  
aaagtatcga gagacaaaat atcagacagc aatgaccaag agtcagcaaa ttgtgatgca  
1920  
aaagcaatat ttgctgtgct cacaagcgtc ttgacaaagg atgactggtg gaatcttctg  
1980  
ttgaaggcca tatactcctt atgtgacctc tcccgatttc aagaggctga gttgcttgta  
2040  
gattcctcat tggaaatatta ctcatTTTTat gatgacaggc aaaaacgcaa agaactagaa  
2100  
tactttggtc tgtctgctgc aattctggac aaaaatttca gaaaggcata caactatata  
2160  
aggataatgg taatggaaaa tgtcaataaa cccagctctt ggaacatttt caatcaagtt  
2220  
accatgcact cccaagatgt acgacatcat cgcttctgct tccgtttgat gctgaaaaac  
2280  
ccagaaaatc atgccctatg tgtcttaaat ggacacaatg catttgatc tggtagtttt  
2340  
aagcatgcgc ttggacagta tgtgcaagcc tttegcactc accctgacga acctctctat  
2400  
agcttctgta taggcctaac ctttattcat atggcatctc agaagtatgt gttacggaga  
2460  
catgctctta ttgtacaggg cttttccttt cttaatcgat acctcagttt acgtggggccc  
2520

tgccaggaat cattctacaa tttgggcccgt ggcccttcac agttggggct gattcatctt  
2580  
gcaatccact attatcagaa ggccctggag ctccctccac ttgtggtaga gggatatagaa  
2640  
cttgaccagt tagacttacg aagagatatt gcctacaact tgtctctcat ctatcagagc  
2700  
agtgggaata ccggaatggc tcaaacgctt ttgtatacct attgttctat ataaagcacc  
2760  
gcaactgaga acagagcaat ggcagctgct gtgtgaggac cagtgtcttc tgtctcaggg  
2820  
cttattatctt gtaactccaa aatagaaatg acaatttcag aattacctaa caaacagtgt  
2880  
atctattttt aatatgtgat aatgatcttg tggatatatat gcaaaattat tctacaaaa  
2940  
atctgtatat tggctctgca ttttcccttc acattctata gtgaattgtt cccaatgttg  
3000  
aaatggagct gtaagccttt gagctagctt ggagtcgaat acactatttt tcaactcacac  
3060  
catttattca tctttgtatt taatactata gctctgtcaa tatcacatga ggcagttttt  
3120  
caaatacgtg taaacagagg ttgcttatta ttaaaggaaa gacaaagtgg gactctttat  
3180  
gatgtcatga ccatgataac taagcaccta agaaaattat ttaaaatagt tatgtggtag  
3240  
gcagaaaagac aaataattta gttttttact tttcaccagc atgtatctta gctacctaaa  
3300  
ctgaaacatg ggaggtggg ctttaattcaa aatatattgc tccaaggcaa ataaaaaat  
3360  
gctttatcta tatttggggc tttctgatga aaaaatagag aagagcttgt tcaataacag  
3420  
gacatgggtt ccatttcaag atcacaagta atataagact gggcaagtag tacgtatgga  
3480  
ataaaggaca tactgctgat tgataaagta aaaaactttt tttttttgtt tgtttactca  
3540  
tctccactat ttattatatg ttcttgaatt taagttaaca gtacttttta gatgatatac  
3600  
tgtttagctta ataacaactt ttaggggaaa aataaatgct gtaattaatg tgcacatggg  
3660  
ttagtaacac ccagcccaat tgtgggaggg aaacaagtag aggccttaga tcaaagaaat  
3720  
aaaattggga cttattagaa attcttacca ctgtttctac tgtacacaaa actttctagt  
3780  
tgagcagaat ttgtatgcaa taagtaaata tattgtatac tccatgtgta taatttaa  
3840  
gcattttatt tttataattg aggttaactg tttcacatgc ttaattttta ctttatgcca  
3900  
tttataggta atggtagagg taactgagat acagtaataa gtttagacttg tgtgttgga  
3960  
ttctgtggaa ctgagcattc tgtgtccga gttctctct taaattagct cactggactg  
4020  
tggtccagt gtctactaaa tagccgtgga ggaaataagt ctccctgttt tatgcactga  
4080  
gactctgctg ctctgcatg atcacagttg atcgaggagg gagtctgctc ctgaaccaac  
4140

ctgggccaat caggagtttc ctccgcctt ccctgggaat ttcagacttg aaatagttca  
 4200  
 tgtagggcca gaacttcaga a  
 4221

<210> 5374

<211> 886

<212> PRT

<213> Homo sapiens

<400> 5374

Met	Ser	Gly	Phe	Ser	Pro	Glu	Leu	Ile	Asp	Tyr	Leu	Glu	Gly	Lys	Ile
1				5					10					15	
Ser	Phe	Glu	Glu	Phe	Glu	Arg	Arg	Arg	Glu	Glu	Arg	Lys	Thr	Arg	Glu
		20						25				30			
Lys	Lys	Ser	Leu	Gln	Glu	Lys	Gly	Lys	Leu	Ser	Ala	Glu	Glu	Asn	Pro
		35					40					45			
Asp	Asp	Ser	Glu	Val	Pro	Ser	Ser	Ser	Gly	Ile	Asn	Ser	Thr	Lys	Ser
	50					55					60				
Gln	Asp	Lys	Asp	Val	Asn	Glu	Gly	Glu	Thr	Ser	Asp	Gly	Val	Arg	Lys
65					70					75					80
Ser	Val	His	Lys	Val	Phe	Ala	Ser	Met	Leu	Gly	Glu	Asn	Glu	Asp	Asp
			85						90					95	
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Thr
			100					105					110		
Pro	Glu	Gln	Pro	Thr	Ala	Gly	Asp	Val	Phe	Val	Leu	Glu	Met	Val	Leu
		115					120					125			
Asn	Arg	Glu	Thr	Lys	Lys	Met	Met	Lys	Glu	Lys	Arg	Pro	Arg	Ser	Lys
	130					135					140				
Leu	Pro	Arg	Ala	Leu	Arg	Gly	Leu	Met	Gly	Glu	Ala	Asn	Ile	Arg	Phe
145					150					155					160
Ala	Arg	Gly	Glu	Arg	Glu	Glu	Ala	Ile	Leu	Met	Cys	Met	Glu	Ile	Ile
			165						170					175	
Arg	Gln	Ala	Pro	Leu	Ala	Tyr	Glu	Pro	Phe	Ser	Thr	Leu	Ala	Met	Ile
		180						185					190		
Tyr	Glu	Asp	Gln	Gly	Asp	Met	Glu	Lys	Ser	Leu	Gln	Phe	Glu	Leu	Ile
	195						200					205			
Ala	Ala	His	Leu	Asn	Pro	Ser	Asp	Thr	Glu	Glu	Trp	Val	Arg	Leu	Ala
	210					215					220				
Glu	Met	Ser	Leu	Glu	Gln	Asp	Asn	Ile	Lys	Gln	Ala	Ile	Phe	Cys	Tyr
225					230					235					240
Thr	Lys	Ala	Leu	Lys	Tyr	Glu	Pro	Thr	Asn	Val	Arg	Tyr	Leu	Trp	Glu
			245						250					255	
Arg	Ser	Ser	Leu	Tyr	Glu	Gln	Met	Gly	Asp	His	Lys	Met	Ala	Met	Asp
		260						265					270		
Gly	Tyr	Arg	Arg	Ile	Leu	Asn	Leu	Leu	Ser	Pro	Ser	Asp	Gly	Glu	Arg
	275					280						285			
Phe	Met	Gln	Leu	Ala	Arg	Asp	Met	Ala	Lys	Ser	Tyr	Tyr	Glu	Ala	Asn
	290					295					300				
Asp	Val	Thr	Ser	Ala	Ile	Asn	Ile	Ile	Asp	Glu	Ala	Phe	Ser	Lys	His
305					310					315					320
Gln	Gly	Leu	Val	Ser	Met	Glu	Asp	Val	Asn	Ile	Ala	Ala	Glu	Leu	Tyr
			325						330					335	
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe

4555

```

      770              775              780
Tyr Val Leu Arg Arg His Ala Leu Ile Val Gln Gly Phe Ser Phe Leu
785              790              795              800
Asn Arg Tyr Leu Ser Leu Arg Gly Pro Cys Gln Glu Ser Phe Tyr Asn
      805              810              815
Leu Gly Arg Gly Leu His Gln Leu Gly Leu Ile His Leu Ala Ile His
      820              825              830
Tyr Tyr Gln Lys Ala Leu Glu Leu Pro Pro Leu Val Val Glu Gly Ile
      835              840              845
Glu Leu Asp Gln Leu Asp Leu Arg Arg Asp Ile Ala Tyr Asn Leu Ser
      850              855              860
Leu Ile Tyr Gln Ser Ser Gly Asn Thr Gly Met Ala Gln Thr Leu Leu
865              870              875              880
Tyr Thr Tyr Cys Ser Ile
      885

```

&lt;210&gt; 5375

&lt;211&gt; 526

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5375

```

ctctaggaac cccctccaagt ggctcgggtgt cgccctcagc ttttctaaag ggatggatga
60
taggggtcagg ggtagaggat ttgtgatcct tcaagtttgc agggcttccc gtgttctaag
120
tggtaacgat ctgtcttctg caaatgggtt acagcgtgct gctgccagtt ctgaatcccc
180
agtagcccg agttgggtgc agttgaaatc catttccctt tttgccttta gtgaggcatc
240
ccctcctcc ttattaaaga agaatacatg tcgctgccat ttgccacgta tttgccatag
300
accaggact attagcatct ttaaccacag taaccacact ggggatggct ggggaatgtt
360
catgtcccca ttttacagga gtggtgatta aggctcaaag gatggaggtg atggatcaaa
420
gtcgtctgcc aagtgggtgc agcattggtt ctcagaccga ggcccgtcta cacagtgtctg
480
tgcctcctcc caccacgaat gcacgtggcc cactctgccc acgcgt
526

```

&lt;210&gt; 5376

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5376

```

Met Asp Asp Arg Val Arg Gly Arg Gly Phe Val Ile Leu Gln Val Cys
1          5          10          15
Arg Ala Ser Arg Val Leu Ser Gly Asn Asp Leu Ser Ser Ala Asn Gly
20          25          30
Leu Gln Arg Ala Ala Ala Ser Ser Glu Ser Pro Val Ala Arg Thr Trp
35          40          45
Val Gln Leu Lys Ser Ile Ser Leu Phe Ala Phe Ser Glu Ala Ser Pro

```



50		55		60
Ser Ser Leu Leu Lys Lys Asn Thr Cys Arg Cys His Leu Pro Arg Ile				
65		70		75
Cys His Arg Pro Arg Thr Ile Ser Ile Phe Asn Pro Arg Asn His Thr				
	85		90	95
Gly Asp Gly Trp Gly Met Phe Met Ser Pro Phe Tyr Arg Ser Gly Asp				
	100		105	110

&lt;210&gt; 5377

&lt;211&gt; 1452

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5377

```

nctcgagctg ggtcccgatt cagacatgaa atatccttta catggtgtcc atccatgtat
60
cttgtggcgg cctcggcagc ggtgttctcg cgcttgcgaa gcgggctccg gctcggctcg
120
cggggactgt gcacgaggtt ggcgacgccg ccccgccggg cccagatca ggccgcagag
180
atcgggagcc gcgggagcac taaggcgcaa gggccacagc agcagccggg ctcagagggg
240
cccagctatg ccaaaaaagt tgcgctctgg cttgctgggc tgcttgagc tgggtgggact
300
gtgagcgctg tctatatctt tggaaacaac ccggtggacg aaaatggtgc caagattcct
360
gatgagttcg acaatgatcc aattctggta cagcagttgc gccggacata caaatatttc
420
aaagattata gacagatgat catcgagccc accagccctt gccttctccc agaccctctg
480
caggaaccgt actaccagcc accctacagc ctggttttgg agctcaccgg cgtcctcttg
540
catcctgagt ggtcgctggc cactggctgg aggtttaaga agcgcccagg catcgagacc
600
ttgttcagc agcttgcccc ttatatgaa attgtcatct ttacgtcaga gactggcatg
660
actgcgttcc cactcattga tagtgtggac ccccatggct tcatctccta ccgcctattc
720
cgggacgcca caagatacat ggatggacac catgtaaagg atatttcatg tctgaatcgg
780
gaccagctc gagtagtagt tgtggactgc aagaaggaag ccttcgcct gcagccctat
840
aacggcggtg ccctgcggcc ctgggacggc aactctgatg accgggtctt gttggatctg
900
tctgccttc tcaagaccat tgactgaat ggtgtggagg acgtgcgaac cgtgctggag
960
cactatgccc tggaggatga cccgctggcg gctttcaaac agcggcaaag ccggctagag
1020
caggaggagc agcagcgctt ggccgagctc tccaagtcca acaagcagaa cctcttcctt
1080
ggctccctca ccagccgctt gtggcctcgc tccaaacagc cctgaactct gggcctcctc
1140
aaactcagtg cctgggtcca gggccccagt gcttcagac caagacttgg gccaccactt
1200

```

gtccaataaa gtacatccca gacgccacac ctgctgtgtc ccgagagtct ccagatgggg  
 1260  
 gcatcagggt gaggtccggg actcttgggt catcgctccca cagtggctga tcggctgcc  
 1320  
 agcacagtgg ggggtgctttg ttggatcaga gcagattttt caccctgggtc tcggaatcta  
 1380  
 aaaaccctcg ctgtgtcttc ctgtgtgttg cgtgatctgt gaaaaataca tctccctctg  
 1440  
 accaaaaaaaa aa  
 1452

<210> 5378

<211> 374

<212> PRT

<213> Homo sapiens

<400> 5378

Xaa	Arg	Ala	Gly	Ser	Arg	Phe	Arg	His	Glu	Ile	Ser	Phe	Thr	Trp	Cys
1				5					10					15	
Pro	Ser	Met	Tyr	Leu	Val	Ala	Ala	Ser	Ala	Ala	Val	Phe	Ser	Arg	Leu
			20					25					30		
Arg	Ser	Gly	Leu	Arg	Leu	Gly	Ser	Arg	Gly	Leu	Cys	Thr	Arg	Leu	Ala
		35					40					45			
Thr	Pro	Pro	Arg	Arg	Ala	Pro	Asp	Gln	Ala	Ala	Glu	Ile	Gly	Ser	Arg
	50					55					60				
Gly	Ser	Thr	Lys	Ala	Gln	Gly	Pro	Gln	Gln	Gln	Pro	Gly	Ser	Glu	Gly
65				70					75					80	
Pro	Ser	Tyr	Ala	Lys	Lys	Val	Ala	Leu	Trp	Leu	Ala	Gly	Leu	Leu	Gly
				85					90					95	
Ala	Gly	Gly	Thr	Val	Ser	Val	Val	Tyr	Ile	Phe	Gly	Asn	Asn	Pro	Val
			100					105					110		
Asp	Glu	Asn	Gly	Ala	Lys	Ile	Pro	Asp	Glu	Phe	Asp	Asn	Asp	Pro	Ile
	115						120					125			
Leu	Val	Gln	Gln	Leu	Arg	Arg	Thr	Tyr	Lys	Tyr	Phe	Lys	Asp	Tyr	Arg
	130					135					140				
Gln	Met	Ile	Ile	Glu	Pro	Thr	Ser	Pro	Cys	Leu	Leu	Pro	Asp	Pro	Leu
145					150					155					160
Gln	Glu	Pro	Tyr	Tyr	Gln	Pro	Pro	Tyr	Thr	Leu	Val	Leu	Glu	Leu	Thr
			165						170					175	
Gly	Val	Leu	Leu	His	Pro	Glu	Trp	Ser	Leu	Ala	Thr	Gly	Trp	Arg	Phe
			180					185					190		
Lys	Lys	Arg	Pro	Gly	Ile	Glu	Thr	Leu	Phe	Gln	Gln	Leu	Ala	Pro	Leu
	195						200					205			
Tyr	Glu	Ile	Val	Ile	Phe	Thr	Ser	Glu	Thr	Gly	Met	Thr	Ala	Phe	Pro
	210						215					220			
Leu	Ile	Asp	Ser	Val	Asp	Pro	His	Gly	Phe	Ile	Ser	Tyr	Arg	Leu	Phe
225				230						235					240
Arg	Asp	Ala	Thr	Arg	Tyr	Met	Asp	Gly	His	His	Val	Lys	Asp	Ile	Ser
				245					250					255	
Cys	Leu	Asn	Arg	Asp	Pro	Ala	Arg	Val	Val	Val	Val	Asp	Cys	Lys	Lys
		260					265						270		
Glu	Ala	Phe	Arg	Leu	Gln	Pro	Tyr	Asn	Gly	Val	Ala	Leu	Arg	Pro	Trp
	275						280					285			
Asp	Gly	Asn	Ser	Asp	Asp	Arg	Val	Leu	Leu	Asp	Leu	Ser	Ala	Phe	Leu

290                      295                      300  
 Lys Thr Ile Ala Leu Asn Gly Val Glu Asp Val Arg Thr Val Leu Glu  
 305                      310                      315                      320  
 His Tyr Ala Leu Glu Asp Asp Pro Leu Ala Ala Phe Lys Gln Arg Gln  
                     325                      330                      335  
 Ser Arg Leu Glu Gln Glu Glu Gln Arg Leu Ala Glu Leu Ser Lys  
                     340                      345                      350  
 Ser Asn Lys Gln Asn Leu Phe Leu Gly Ser Leu Thr Ser Arg Leu Trp  
                     355                      360                      365  
 Pro Arg Ser Lys Gln Pro  
 370

&lt;210&gt; 5379

&lt;211&gt; 3213

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5379

naggcggtcac tcaatatccc tgcagtggcg gccgcccattg tgatcaaacg gtatacagcc  
 60  
 caggcgccag atgagctgtc ctttgagggtg aggctgtggg gaagcagatt ccagctgggc  
 120  
 tccccacacc cctgtctcct tctgaccctt ctcttccac cgcctctc ccaggtggga  
 180  
 gacattgtct cggtgatcga catgccaccc acagaggatc ggagctggtg gcggggcaag  
 240  
 cgaggcttcc agctgtgcca cggcctcgtg ggaagctggc cggcctgctc cgcaccttca  
 300  
 tgcgtctccg cccttctcgg cagcggctgc ggcagcgggg aatcctgcga cagaggggtg  
 360  
 ttggtgcga tcttgccgag cacctcagca actcaggcca ggatggtgct gcgctgctgc  
 420  
 tccgagttca ttgaggccca cgggggtggtg gatgggatct accggctctc aggcgtgtct  
 480  
 tccaacatcc agaggcttcg gcacgagttt gacagtgaga ggatcccga gctgtctggc  
 540  
 cctgcattcc tgcaggacat ccacagcgtg tcctccctct gcaagctcta cttccgagag  
 600  
 cttccgaacc ctctgtcac ctaccagctc tatgggaagt tcagtaggc catgtcagt  
 660  
 cctggggagg aggagcgtct ggtgcgggtg cacgatgtca tccagcagct gccccacca  
 720  
 cattacagga ccctggagta cctgtgagg cacctggccc gcatggcgag acacagtgc  
 780  
 aacaccagca tgcattgccg caacctggcc attgtctggg caccacacct gctacggtcc  
 840  
 atggagctgg agtcagtggg aatgggtggc gcggcgccgt tccgggaagt tgggtgcag  
 900  
 tcggtggtgg tggagtttct gtcacccat gtggacgtcc tgttcagcga caccttcacc  
 960  
 tccgccggcc tcgacctgc aggcgctgc ctgctccca ggcccaagtc ccttgcgggc  
 1020  
 agctgcccct ccaccgcct gctgacgtg gaggaagccc aggcacgcac ccagggccgg  
 1080

ctggggagcg ccacggagcc cacaactccc aaggccccgg cctcacctgc ggaaaggagg  
1140  
aaaggggaga gaggggagaa gcagcggaag ccagggggca gcagctggaa gacgttcttt  
1200  
gcactggggc ggggccccag tgtccctcga aagaagcccc tgccctggct ggggggcacc  
1260  
cgtgccccac cgcagccttc agcctggcta gatgatggg atgagctgga cttcagccca  
1320  
ccccgctgcc tggagggact cggggggctg gactttgatc ccttaacctt ccgctgcagc  
1380  
agccccaccc caggggatcc cgcacctccc gccagcccag cccccccgc cctgacctt  
1440  
gccttcccac ccagggtgac cccccaggcc atctcgcccc gggggccac cagccccgc  
1500  
tcgctgctg cctagacat ctacagagccc ctggctgtat cagtgccacc cgctgtccta  
1560  
gaactgctgg gggctggggg agcacctgcc tcagccaccc caacaccagc tctcagcccc  
1620  
ggccggagcc tgcgccccca tctcataccc ctgctgctgc gaggagccga ggccccgctg  
1680  
actgacgcct gccagcagga gatgtgcagc aagctccggg gagcccaggg cccactcgca  
1740  
cgctcatgg ccctggccct ggtgagcgg gctcagcagg tggccgagca acagagccag  
1800  
caggagtgtg ggggcacccc acctgcttcc caatccccct tccaccgctc gctgtctctg  
1860  
gaggtgggcg gggagccctt ggggacctca gggagtgggc cacctccaa ctccctagca  
1920  
cacccgggtg cctgggtccc gggaccccc caactactac caaggcaaca aagtgatggg  
1980  
agctgctga ggagccagcg gcccatgggg acctcaagga ggggactccg aggccctgcc  
2040  
caggtcagtg ccagctcag ggcaggtggc gggggcagg atgcgccaga ggcagcagcc  
2100  
cagtccccat gttctgtccc ctacaggtt cctacccccg gcttcttctc cccagcccc  
2160  
agggagtgcc tgccaccctt cctcggggtc cccaagccag gcttgtacc cctgggcccc  
2220  
ccatccttcc agcccagttc cccagcccca gtctggagga gctctctggg cccccctgca  
2280  
ccactcgaca ggggagagaa cctgtactat gagatcgggg caagtgaggg gtccccctat  
2340  
tctggcccca cccgctctg gagtcccttt cgctccatgc cccccgacag gctcaatgcc  
2400  
tcctacggca tgcttgcca atcaccccca ctccacaggt cccccgactt cctgctcagc  
2460  
taccgcccag cccctcctg ctttccccct gaccacctg gctactcagc cccccagcag  
2520  
cctgctcgcc gccctacacc gctgagccc ctctacgtca acctagctct agggcccagg  
2580  
ggctccctcac ctgctcttc ctctcctct tcccctctg cccacccccg aagccgttca  
2640  
gatcccggtc cccagtcct cgccttccc cagaacaac gggcaccctg gggaccccg  
2700

acccctcata ggggtgccggg tccctggggc cctcctgagc ctctcctgct ctacagggca  
 2760  
 gccccgccag cctacggaag ggggggagag ctccaccgag ggtccttgta cagaaatgga  
 2820  
 gggcaaagag gggagggggc tgggtcccca ccccttacc ccactcccag ctggtccctc  
 2880  
 cactctgagg gccagaccg aagctactgc tgagcaccag ctgggagggg ccgtccttcc  
 2940  
 ttcccttcac cctcactgga tcttgggcca accaaatccc ttgttttgta ttttcttgaa  
 3000  
 ccccgaccac taccaggt ttctaacttt gtaacttgc tctgatgtgg gtccttaacc  
 3060  
 tataatctca gcttcctac cctggactga agggctctgcc catccccca ccacctcca  
 3120  
 tcctgggggc cctgcacaa atctggggtg ggaggggcta ggctgacccc atcctcctct  
 3180  
 ccctccagga gccccagca tgcctgacc tgt  
 3213

&lt;210&gt; 5380

&lt;211&gt; 903

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5380

Met	Pro	Pro	Thr	Glu	Asp	Arg	Ser	Trp	Trp	Arg	Gly	Lys	Arg	Gly	Phe
1				5				10						15	
Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala	Pro
			20					25					30		
Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu	Ser
		35					40					45			
Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala	Thr
	50				55						60				
Gln	Ala	Arg	Met	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile	Glu	Ala	His
65				70					75					80	
Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser	Ser	Asn	Ile
			85					90						95	
Gln	Arg	Leu	Arg	His	Glu	Phe	Asp	Ser	Glu	Arg	Ile	Pro	Glu	Leu	Ser
		100						105					110		
Gly	Pro	Ala	Phe	Leu	Gln	Asp	Ile	His	Ser	Val	Ser	Ser	Leu	Cys	Lys
		115				120						125			
Leu	Tyr	Phe	Arg	Glu	Leu	Pro	Asn	Pro	Leu	Leu	Thr	Tyr	Gln	Leu	Tyr
	130					135					140				
Gly	Lys	Phe	Ser	Glu	Ala	Met	Ser	Val	Pro	Gly	Glu	Glu	Glu	Arg	Leu
145				150					155					160	
Val	Arg	Val	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg
			165					170						175	
Thr	Leu	Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser
		180						185					190		
Ala	Asn	Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro
	195					200						205			
Asn	Leu	Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala
	210					215					220				
Ala	Ala	Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu

225		230		235		240
Leu Thr His Val Asp	Val Leu Phe Ser Asp Thr Phe Thr Ser Ala Gly					
	245		250		255	
Leu Asp Pro Ala Gly Arg Cys Leu Leu Pro Arg Pro Lys Ser Leu Ala						
	260		265		270	
Gly Ser Cys Pro Ser Thr Arg Leu Leu Thr Leu Glu Glu Ala Gln Ala						
	275		280		285	
Arg Thr Gln Gly Arg Leu Gly Thr Pro Thr Glu Pro Thr Thr Pro Lys						
	290		295		300	
Ala Pro Ala Ser Pro Ala Glu Arg Arg Lys Gly Glu Arg Gly Glu Lys						
305		310		315		320
Gln Arg Lys Pro Gly Gly Ser Ser Trp Lys Thr Phe Phe Ala Leu Gly						
	325		330		335	
Arg Gly Pro Ser Val Pro Arg Lys Lys Pro Leu Pro Trp Leu Gly Gly						
	340		345		350	
Thr Arg Ala Pro Pro Gln Pro Ser Ala Trp Leu Asp Asp Gly Asp Glu						
	355		360		365	
Leu Asp Phe Ser Pro Pro Arg Cys Leu Glu Gly Leu Arg Gly Leu Asp						
	370		375		380	
Phe Asp Pro Leu Thr Phe Arg Cys Ser Ser Pro Thr Pro Gly Asp Pro						
385		390		395		400
Ala Pro Pro Ala Ser Pro Ala Pro Pro Ala Pro Ala Ser Ala Phe Pro						
	405		410		415	
Pro Arg Val Thr Pro Gln Ala Ile Ser Pro Arg Gly Pro Thr Ser Pro						
	420		425		430	
Ala Ser Pro Ala Ala Leu Asp Ile Ser Glu Pro Leu Ala Val Ser Val						
	435		440		445	
Pro Pro Ala Val Leu Glu Leu Leu Gly Ala Gly Gly Ala Pro Ala Ser						
	450		455		460	
Ala Thr Pro Thr Pro Ala Leu Ser Pro Gly Arg Ser Leu Arg Pro His						
465		470		475		480
Leu Ile Pro Leu Leu Leu Arg Gly Ala Glu Ala Pro Leu Thr Asp Ala						
	485		490		495	
Cys Gln Gln Glu Met Cys Ser Lys Leu Arg Gly Ala Gln Gly Pro Leu						
	500		505		510	
Ala Arg Leu Met Ala Leu Ala Leu Ala Glu Arg Ala Gln Gln Val Ala						
	515		520		525	
Glu Gln Gln Ser Gln Gln Glu Cys Gly Gly Thr Pro Pro Ala Ser Gln						
	530		535		540	
Ser Pro Phe His Arg Ser Leu Ser Leu Glu Val Gly Gly Glu Pro Leu						
545		550		555		560
Gly Thr Ser Gly Ser Gly Pro Pro Pro Asn Ser Leu Ala His Pro Gly						
	565		570		575	
Ala Trp Val Pro Gly Pro Pro Pro Tyr Leu Pro Arg Gln Gln Ser Asp						
	580		585		590	
Gly Ser Leu Arg Ser Gln Arg Pro Met Gly Thr Ser Arg Arg Gly						
	595		600		605	
Leu Arg Gly Pro Ala Gln Val Ser Ala Gln Leu Arg Ala Gly Gly Gly						
	610		615		620	
Gly Arg Asp Ala Pro Glu Ala Ala Ala Gln Ser Pro Cys Ser Val Pro						
625		630		635		640
Ser Gln Val Pro Thr Pro Gly Phe Phe Ser Pro Ala Pro Arg Glu Cys						
	645		650		655	
Leu Pro Pro Phe Leu Gly Val Pro Lys Pro Gly Leu Tyr Pro Leu Gly						

660 665 670  
 Pro Pro Ser Phe Gln Pro Ser Ser Pro Ala Pro Val Trp Arg Ser Ser  
 675 680 685  
 Leu Gly Pro Pro Ala Pro Leu Asp Arg Gly Glu Asn Leu Tyr Tyr Glu  
 690 695 700  
 Ile Gly Ala Ser Glu Gly Ser Pro Tyr Ser Gly Pro Thr Arg Ser Trp  
 705 710 715 720  
 Ser Pro Phe Arg Ser Met Pro Pro Asp Arg Leu Asn Ala Ser Tyr Gly  
 725 730 735  
 Met Leu Gly Gln Ser Pro Pro Leu His Arg Ser Pro Asp Phe Leu Leu  
 740 745 750  
 Ser Tyr Pro Pro Ala Pro Ser Cys Phe Pro Pro Asp His Leu Gly Tyr  
 755 760 765  
 Ser Ala Pro Gln His Pro Ala Arg Arg Pro Thr Pro Pro Glu Pro Leu  
 770 775 780  
 Tyr Val Asn Leu Ala Leu Gly Pro Arg Gly Pro Ser Pro Ala Ser Ser  
 785 790 795 800  
 Ser Ser Ser Ser Pro Pro Ala His Pro Arg Ser Arg Ser Asp Pro Gly  
 805 810 815  
 Pro Pro Val Pro Arg Leu Pro Gln Lys Gln Arg Ala Pro Trp Gly Pro  
 820 825 830  
 Arg Thr Pro His Arg Val Pro Gly Pro Trp Gly Pro Pro Glu Pro Leu  
 835 840 845  
 Leu Leu Tyr Arg Ala Ala Pro Pro Ala Tyr Gly Arg Gly Gly Glu Leu  
 850 855 860  
 His Arg Gly Ser Leu Tyr Arg Asn Gly Gly Gln Arg Gly Glu Gly Ala  
 865 870 875 880  
 Gly Pro Pro Pro Pro Tyr Pro Thr Pro Ser Trp Ser Leu His Ser Glu  
 885 890 895  
 Gly Gln Thr Arg Ser Tyr Cys  
 900

&lt;210&gt; 5381

&lt;211&gt; 1576

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5381

nccatggcga tgaggccctt ctttggcatc gtccccgtcc tcatggatga gaagggcagc  
 60  
 gtcgtggagg gcagcaacgt ctccggggcc ctgtgcatct cccaggcctg gccgggcatg  
 120  
 gccaggacca tctatggcga ccaccagcga tttgtggacg cctacttcaa ggcctaccca  
 180  
 ggctattact tcaactggaga cggggcttac cgaactgagg gcggctatta ccagatcaca  
 240  
 gggcggatgg atgatgtcat caacatcagt ggccaccggc tggggaccgc agagattgag  
 300  
 gacgccatcg ccgaccaccc tgcagtacca gaaagtgcctg tcattggcta cccccacgac  
 360  
 atcaaaggag aagctgcctt tgccttcatt gtggtgaaag atagtgcggg tgactcagat  
 420  
 gtggtggtgc aggagctcaa gtccatggtg gccaccaaga tcgccaata tgctgtgcct  
 480

gatgagatcc tgggtggtgaa acgtcttcca aaaaccaggt ctgggaaggt catgcggcgg  
 540  
 ctcctgagga agatcatcac tagtgaggcc caggagctgg gagacactac caccttgga  
 600  
 gaccccagca tcatgcgaga gatcctgagt gtctaccaga agtgcaagga caagcaggct  
 660  
 gctgctaagt gagctggcac cttgtggggc tcttgggatg ggcgggcacc caagccctgg  
 720  
 cttgtccttc ccagaaggta cccctgaggt tggcgtcttc ctacgtccca gaagcagccc  
 780  
 ccaccccaca catgaccac accgcctca cgtgaagctg ggctgagagc cctttctccc  
 840  
 atccattgga ggtcccagga gtgtcaccca tggagaggct atgcgacatg gctagggctg  
 900  
 gttctgccat ctgagtttgg tttcctggaa tgaaaaggca ttgccatctc cattcctctg  
 960  
 ccctcttgag ccagcacagg aaggtgaggc cctgggtag cgcgctgct cagataacac  
 1020  
 agagctagtt agctagtagc aaccgtgtt tctccagatc tgtctagata caaaggctcag  
 1080  
 aaatcttatt tttatacttt tatattgtgg aagaacagca tgcaacactc acatgtagt  
 1140  
 tgtggattta cttgaacatg ttcttttta catgtagtta tgaaaatctc cttttttgcc  
 1200  
 tctactggtg aggaaacatg aggatcagag gccacatttt taattattgt tagtgtattt  
 1260  
 ggaagtctga attggagatg tttgtacctc tgtctaaaca gtcccttga ggacttccaa  
 1320  
 gctccggca tcttttctg gtgagtgtt ctctgtgct tggttgtgta taatggagct  
 1380  
 aactcctaag cgggtgggtg aatgtggcg ccttagttct gaagctactc cagttatgtt  
 1440  
 ctgtttcttc aagctgtgat ccagaaagat tttgtgccc ccagatgct tcttgatagg  
 1500  
 agaggcaaca tactccaat agttgggttc ttcagggaag ctattagaaa ctcagggtgac  
 1560  
 ttgttagagc actaac  
 1576

&lt;210&gt; 5382

&lt;211&gt; 223

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5382

Xaa	Met	Ala	Met	Arg	Pro	Phe	Phe	Gly	Ile	Val	Pro	Val	Leu	Met	Asp
1				5				10						15	
Glu	Lys	Gly	Ser	Val	Val	Glu	Gly	Ser	Asn	Val	Ser	Gly	Ala	Leu	Cys
			20					25					30		
Ile	Ser	Gln	Ala	Trp	Pro	Gly	Met	Ala	Arg	Thr	Ile	Tyr	Gly	Asp	His
		35				40					45				
Gln	Arg	Phe	Val	Asp	Ala	Tyr	Phe	Lys	Ala	Tyr	Pro	Gly	Tyr	Tyr	Phe
	50					55				60					
Thr	Gly	Asp	Gly	Ala	Tyr	Arg	Thr	Glu	Gly	Gly	Tyr	Tyr	Gln	Ile	Thr



65		70		75		80									
Gly	Arg	Met	Asp	Asp	Val	Ile	Asn	Ile	Ser	Gly	His	Arg	Leu	Gly	Thr
			85						90					95	
Ala	Glu	Ile	Glu	Asp	Ala	Ile	Ala	Asp	His	Pro	Ala	Val	Pro	Glu	Ser
		100						105					110		
Ala	Val	Ile	Gly	Tyr	Pro	His	Asp	Ile	Lys	Gly	Glu	Ala	Ala	Phe	Ala
	115						120					125			
Phe	Ile	Val	Val	Lys	Asp	Ser	Ala	Gly	Asp	Ser	Asp	Val	Val	Val	Gln
	130					135					140				
Glu	Leu	Lys	Ser	Met	Val	Ala	Thr	Lys	Ile	Ala	Lys	Tyr	Ala	Val	Pro
145					150					155				160	
Asp	Glu	Ile	Leu	Val	Val	Lys	Arg	Leu	Pro	Lys	Thr	Arg	Ser	Gly	Lys
			165						170					175	
Val	Met	Arg	Arg	Leu	Leu	Arg	Lys	Ile	Ile	Thr	Ser	Glu	Ala	Gln	Glu
	180						185					190			
Leu	Gly	Asp	Thr	Thr	Thr	Leu	Glu	Asp	Pro	Ser	Ile	Ile	Ala	Glu	Ile
	195						200					205			
Leu	Ser	Val	Tyr	Gln	Lys	Cys	Lys	Asp	Lys	Gln	Ala	Ala	Ala	Lys	
	210					215					220				

&lt;210&gt; 5383

&lt;211&gt; 2027

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5383

gttgcttccg gtatctcttc tcaagacggc ttcctctat gtgtctatgt ctatgtgtcc  
60

ccctgtaagg acagcagtca tgctggatca gggcccaccc tcatccacac aaccttgtct  
120

taactcagta catctccagt ggccccattt ccaaagaagg ttgcgttctg gggttctggg  
180

ggctgagact ccagcatatg aatttggggg ggacatgatg ggaccacagc cagtggcctt  
240

ctcctccgag cagcgccggg caggccaggg catgaccac acctgtttgt ttccttcag  
300

atcgtctcga cccaggagaa ggagctggtg cagcccttca gctcgtgtt cccgaagggtg  
360

gagtacatcg ccagggccgg cgctggggc atgttcctgg accggcccca gcagtggctc  
420

cagctcgtcc tctccccccc ggccctgttc atcccgagca cagagaatga ggagcagcgg  
480

ctagcctctg ccagagctgt cccaggaat gtccagccgt atgtggtgta cgaggaggtc  
540

accaacgtct ggatcaatgt tcatgacatc ttctatccct tcccccaatc agagggagag  
600

gacgagctct gctttctccg cgccaatgaa tgcaagaccg gcttctgcca tttgtacaaa  
660

gtcaccgccc ttttaaaatc ccagggttac gattggagtg agcccttcag ccccggggaa  
720

ggtgagcaga gcctgacgaa tgctatctgg gtcaatgagg agaccaagct ggtgtacttc  
780

cagggcacca aggacacgcc gctggagcac cacctctacg tggtcagcta tgaggcggcc  
840

ggcgagatcg tacgcctcac cagccccggc ttctcccata gctgctccat gagccagaac  
 900  
 ttcgacatgt tcgtcagcca ctacagcagc gtgagcacgc cgccctgcgt gcacgtctac  
 960  
 aagctgagcg gccccgacga cgacccctcg cacaagcagc cccgcttctg ggctagcatg  
 1020  
 atggaggcag ccaagatctt ccatttccac acgcgctcgg atgtgcggct ctacggcatg  
 1080  
 atctacaagc cccacgcctt gcagccaggg aagaagcacc ccacgcctct ctttgtatat  
 1140  
 ggaggccccc aggtgcagct ggtgaataac tccttcaaag gcatcaagta cttgcggctc  
 1200  
 aacacactgg cctccctggg ctacgcctg gttgtgattg acggcagggg ctctgtcag  
 1260  
 cgagggtctc gggtcgaagg ggccctgaaa aaccaaattg gccaggtgga gatcaggac  
 1320  
 caggtggagg gcctgcagtt cgtggccgag aagtatggct tcatcgacct gagccgagtt  
 1380  
 gccatccatg gctggtccta cgggggcttc ctctcgtca tggggctaata ccacaagccc  
 1440  
 caggtgttca aggtggccat cgcgggtgcc cgggtcaccg tctggatggc ctacgacaca  
 1500  
 gggtagactg agcgtacat ggacgtcctt gagaacaacc agcacggcta tgaggcgggt  
 1560  
 tccgtggccc tgcacgtgga gaagctgccc aatgagccca accgcttget tatcctccac  
 1620  
 ggcttcctgg acgaaaacgt gcactttttc cacacaaact tctcgtctc ccaactgac  
 1680  
 cgagcagga aaccttacca gctccaggtg gccctgcctc ctgtctcccc gcagatctac  
 1740  
 cccaacgaga gacacagtat tcgctgcccc gagtcgggag agcactatga agtcacgttg  
 1800  
 ctgcactttc tacaggaata cctctgagcc tgcccaccgg gagccgccac atcacagcac  
 1860  
 aagtggctgc agcctccgag gggaaccagg cgggagggac tgagtggccc gcgggcccca  
 1920  
 gtgaggcaat ttgtcccgcc cagcgtggc cagccccgag gagccgctgc cttcaccgac  
 1980  
 ccgacgcctt ttatcctttt ttaaagctc ttgggtttta tgtccgc  
 2027

&lt;210&gt; 5384

&lt;211&gt; 508

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5384

Ile Val Ser Thr Gln Glu Lys Glu Leu Val Gln Pro Phe Ser Ser Leu  
 1 5 10 15  
 Phe Pro Lys Val Glu Tyr Ile Ala Arg Ala Gly Ala Trp Ala Met Phe  
 20 25 30  
 Leu Asp Arg Pro Gln Gln Trp Leu Gln Leu Val Leu Leu Pro Pro Ala  
 35 40 45  
 Leu Phe Ile Pro Ser Thr Glu Asn Glu Glu Gln Arg Leu Ala Ser Ala

4567

485 490 495  
 Glu Val Thr Leu Leu His Phe Leu Gln Glu Tyr Leu  
 500 505

<210> 5385  
 <211> 314  
 <212> DNA  
 <213> Homo sapiens

<400> 5385  
 agatctcacg agatggggac cccagctggc actgggtggc atttcttctt cccttgctct  
 60  
 acttgagca tatgttggtc gtggaaccga aaggaacgta gcaaaaagag tgttcccagc  
 120  
 cctccccggg cccagccgct gggcagaggg ctgcatgctg gctggctggc caggctgggg  
 180  
 cagcctggcc tctcggccc ctacgtgca cccaccttc acttcctgga gatgcacca  
 240  
 catctccagg aaaattgttt cagaaaatgc ctacaacaca gcagagagtg gaacaaacag  
 300  
 ggtcccaacg catg  
 314

<210> 5386  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 5386  
 Met Gly Thr Pro Ala Gly Thr Gly Trp His Phe Phe Phe Pro Cys Ser  
 1 5 10 15  
 Thr Trp Ser Ile Cys Cys Ser Trp Asn Arg Lys Glu Arg Ser Lys Lys  
 20 25 30  
 Ser Val Pro Ser Pro Pro Arg Ala Gln Pro Leu Gly Arg Gly Leu His  
 35 40 45  
 Ala Gly Trp Leu Ala Arg Leu Gly Gln Pro Gly Leu Leu Gly Pro Tyr  
 50 55 60  
 Ala Ala Pro Thr Phe His Phe Leu Glu Met His Pro His Leu Gln Glu  
 65 70 75 80  
 Asn Cys Phe Arg Lys Cys Leu Gln His Ser Arg Glu Trp Asn Lys Gln  
 85 90 95  
 Gly Pro Asn Ala  
 100

<210> 5387  
 <211> 375  
 <212> DNA  
 <213> Homo sapiens

<400> 5387  
 ntggactccc ccagggttcag caggatggcg atggccgcta ggatgaagca gatggcgta  
 60  
 accgccacgc accagtccat gggcaactgg tccatgttca cctggtgctt ctgcttctcc  
 120

atgaccctga tcatactcat cgtggagctg tgcgggctcc aggcccgctt cccctgtct  
 180  
 tggcgcaact tccccatcac cttegcctgc tatgcggccc tcttctgct ctcggcctcc  
 240  
 atcatctacc ccaccaccta tgtccagttc ctgtcccacg gccgttcgcg ggaccacgcc  
 300  
 atcgccgcca ccttcttctc ctgcacgcg tgtgtggctt acgccaccga aatggcctgg  
 360  
 acccgggccc gggcc  
 375

<210> 5388

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5388

Xaa	Asp	Ser	Pro	Arg	Phe	Ser	Arg	Met	Ala	Met	Ala	Ala	Arg	Met	Lys
1				5				10					15		
Gln	Met	Ala	Tyr	Thr	Ala	Thr	His	Gln	Ser	Met	Gly	Asn	Trp	Ser	Met
		20					25					30			
Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Met	Thr	Leu	Ile	Ile	Leu	Ile	Val
	35						40				45				
Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu	Ser	Trp	Arg	Asn	Phe
	50				55				60						
Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe	Cys	Leu	Ser	Ala	Ser
65				70				75				80			
Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu	Ser	His	Gly	Arg	Ser
		85					90				95				
Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Ser	Cys	Ile	Ala	Cys	Val	
		100					105				110				
Ala	Tyr	Ala	Thr	Glu	Met	Ala	Trp	Thr	Arg	Ala	Arg	Ala			
	115						120				125				

<210> 5389

<211> 1711

<212> DNA

<213> Homo sapiens

<400> 5389

nncgagcggc agggggccaa acacaaaagg gagccggaga agccctagcc gctgcccagc  
 60  
 agcttgccgg cgtgttctcg cggttccggg cctcaaggcg acggaaacga aaggcgagcg  
 120  
 aagcgcggag gatccggcga gaagaagcgt caggagcct cggcgggtgc cccgggggtcc  
 180  
 gccgaagcca cccggccgcc ggctggggcc cggggtgggt aggaagtgt cccaggcctc  
 240  
 gccaggcct agcgcgggt ttgtgtccga ggcggcggcg gcggcggggg gaggcggagc  
 300  
 cggggggcgc ctgcgggaag gcctctctc cgccgaccgc gcgttttcgg cctaggccgc  
 360  
 ggggccgctc gtggcctccg gggagcaggc gccaggggtt tgtgtgcggt gggggcctgg  
 420

gcctgggcct ggggaagctg acgccggtcg tccggaagcc aggaggagggc gtgaggccgc  
 480  
 tcgtggactc cgggcctagg cctctcctcc tcaaccttct cccggggcct gggtcacccc  
 540  
 aatccacgga gagagagacc cgccgggagg tgcggccgcg ctatggaccc ctgacccccg  
 600  
 tggggtcgct cggactctta acgtgtggac tgaccgctac tgactgcacc gccaatcccc  
 660  
 ccgtctctgc cggccccctta gcatgagcga gggggaccca gccgggtgac attgtgcccg  
 720  
 ttggcggatt ctgatttcc cctcttcccc gtccctctcc tctctctccc ccatgaagtg  
 780  
 attctgagta tcgggggggc tctggattat tgttctgacg aacctctgct tgtggttggg  
 840  
 ggggtattta tctgaggcct tagggctcct cggtgtcttt gagtgttttg tgtgtacata  
 900  
 ttttgcctct aaagtctata aatatacgta tattgagagt gtccacgtct cctcgctgaa  
 960  
 ccttaggaat cccttggcac catgtcctgt gtgcattata aattttctct taaactcaac  
 1020  
 tatgataccg tcacctttga tgggtccac atctccctct gcgacttaaa gaagcagatt  
 1080  
 atggggagag agaagctgaa agctgccgac tgcgacctgc agatcaccaa tgcgcagacg  
 1140  
 aaagaagaat atactgatga taatgctctg attcctaaga attcttctgt aattgttaga  
 1200  
 agaattccta ttggaggtgt taaatctaca agcaagacat atgttataag tcgaactgaa  
 1260  
 ccagcgatgg caactacaaa agcagtatgt aaaaacacaa tctcacactt tttctacaca  
 1320  
 ttgcttttac ctttataatg tagcagttaa gtaaatcatt ttagaactta atatccaact  
 1380  
 gatcatagta catattgtaa ataaaatgta ttttgatgac agctcagttg aatatggata  
 1440  
 atatgtggca tcacttgac acttattttg tagaaatggg taatttgtag ccgtaacact  
 1500  
 gtttcatatt aaatatgata gcattatccc tgtatgacac tgtgttgtag agttaatgta  
 1560  
 tgatcctttt tagatcgttt aggttttaca ctaaggaaca tgatgacatg ttctacattt  
 1620  
 gtctgtctat agttagtatt ttgtatgtat gtacaggctg ttgtgtgctt tttgtttctt  
 1680  
 gcaataaaaa atgtttggag tgtatatatt g  
 1711

&lt;210&gt; 5390

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5390

Met Ser Cys Val His Tyr Lys Phe Ser Ser Lys Leu Asn Tyr Asp Thr

1

5

10

15

Val Thr Phe Asp Gly Leu His Ile Ser Leu Cys Asp Leu Lys Lys Gln

```
<210> 5392
<211> 55
<212> PRT
<213> Homo sapiens
```

&lt;400&gt; 5392

Thr Asn Leu Leu Lys Val Asn Lys Gln Tyr Lys Leu Leu Leu Leu Leu  
 1 5 10 15  
 Leu Leu Arg Gln Gly Leu Ala Leu Ser Phe Arg Leu Lys Cys Ser Gly  
 20 25 30  
 Thr Ile Lys Gly His Cys Asn Leu Ser Leu Asn Leu Leu Gly Ser Ser  
 35 40 45  
 Asn Pro Pro Ala Ser Ala Ser  
 50 55

&lt;210&gt; 5393

&lt;211&gt; 4837

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5393

nnagtatcta gggcgaggagg cgacatggag acagggcgcg ccgagctgta tgaccaggcc  
 60  
 cttttgggca tcttgacgca cgtgggcaac gtccaggatt tctgcgcgt tctctttggc  
 120  
 ttctctacc gcaagacaga cttctatcgc ttgctgcgcc acccatcgga ccgcatgggc  
 180  
 ttcccgcccg gggccgcgca ggccttggtg ctgcaggat tcaaacctt tgaccacatg  
 240  
 gcccgctcagg atgatgagaa gagaaggcag gaacttgaag agaaaatcag aagaaaggaa  
 300  
 gaggaagagg ccaagactgt gtcagctgct gcagctgaga aggagccagt cccagttcca  
 360  
 gtccaggaaa tagagattga ctccaccaca gaattggatg ggcatcagga agtagagaaa  
 420  
 gtgcagcctc caggccctgt gaaggaaatg gcccatggtt cacaggaggc agaagctcca  
 480  
 ggagcagttg ctggtgctgc tgaagtcctt agggaaccac caattcttcc caggattcag  
 540  
 gagcagttcc agaaaaatcc cgacagttac aatggtgctg tccgagagaa ctacacctgg  
 600  
 tcacaggact atactgacct ggaggtcagg gtgccagtac ccaagcacgt ggtgaaggga  
 660  
 aagcaggtct cagtggcct tagcagcagc tccattcgtg tggccatgct ggaggaaaat  
 720  
 ggggagcgcg tctcatgga agggaagctc acccacaaga tcaacactga gagttctctc  
 780  
 tggagtctcg agcccgga gtgcgttttg gtgaacctga gcaaggtggg cgagtattgg  
 840  
 tggaacgcca tcttgagggg agaagagccc atcgacattg acaagatcaa caaggagcgc  
 900  
 tccatggcca ccgtggatga ggaggaacag gcggtgttg acaggcttac ctttgactac  
 960  
 caccagaagc tgcagggcaa gccacagagc catgagctga aagtccatga gatgctgaag  
 1020  
 aaggggtggg atgctgaagg ttctcccttc cgaggccagc gattcgacct tgccatgttc  
 1080  
 aacatctccc cggggctgt gcagttttta tgaccagaag gaaaggaaac cctcgccggt  
 1140



ggggaggcag agccttatcc tcggetgccc ttcttggtc cctgcattcc agggacttgc  
1200  
tcgtcttggt tacccttagc catcctttct ttcaaggggtg aaccaggcct tccaccctga  
1260  
ccttgcatct ccagactggt ccagagaagg tgcggggcca gctgctatgt ggtggccgct  
1320  
gtggctgaca ctgagtgaag gtgtttgaaa tgcaggagag gatatcccag caaattggga  
1380  
tcacatgctt ttgtctccac agcaaccagc cactgcaggc agcatgtctt tctcccctg  
1440  
ctctctgctt gctgttgttt tgacgtatt ctgcttgcat gtcttctggt tgggatgtgg  
1500  
agttgttgct ggactctcag gcgaagctga agtcattgaa gtgtgtgaag ctctgtgctt  
1560  
gcatgagggc aagcaaggaa tggctgtgcc tgaggctgct ctgggaaact ccttgccct  
1620  
tgacctctt tgagagcatt cacgtggtct tcttgctcat cccctataa atgtgctttg  
1680  
cctgcctcag cctcatggc agagcagtgg agactggagc cctgtttgca cgttctagtt  
1740  
gttcggagaa agcctagggt ctgggctcag gtccagatgc agcggggatt ctgttctctg  
1800  
actgtggcga ccttgctttg gttcttggtt aagtgaacca agcccgcca ccacgcattg  
1860  
catgctgtgc ttggctcccc ataagacgtc ctctttgggt gcacggtgtc aaagtgtggg  
1920  
caggagtggg gagctggtgc cctcaggagg agaccacagc atgtccatca gctcagcaga  
1980  
gctcgacagc cacaagtcct gagaagcttt gaccttgaag ggcttctggg agaggaggaa  
2040  
tttctgcatg gggcgtgaag gcacactgtc ccaccacaac tgaaccagaa gagagtgaag  
2100  
actccctct tcccatcctc tgtgccaggt gccagactgt gctccttga acttatggcc  
2160  
caatcttacc tgttctccag ggactggtea ctgcctcagg acccccaagc ctatgccctg  
2220  
agccatggct gctgactgac tccagccaag gtgcaaagac gagattatga gacaggctct  
2280  
caggcctgtg ttccaagtac tcacaggggc tctgggtgcc catcgccggg agtatggttc  
2340  
agctgccacc ggcactgtcc atttgcctgt ctgtcaagct cagagcatgg ataagccaca  
2400  
cagcagggca gtgcaccctg gcacatgca cggccagcaa gaatcaaggc ccgcagatgc  
2460  
taagagggcc tattgtcagg ggaaggcccc cgctcctgca cactctctat ggatacttgg  
2520  
gttggtgggg ctctcttga gagtaagttt gtggtttgtt tctggtttac agtgggtggc  
2580  
gacaccctt gtaagaaagc attcctggga agtcttctgt ggtccaaac atgttgetcc  
2640  
gatcatcaca ggagagcaaa aggcctaga taccctctt ggaatgtgag agtcttgttg  
2700  
tctgatattt gccactgagc tgggtgaagc cctctaaaga gatctcgacc ctggggagca  
2760

gaattcttgt catctatgag gggctctgag aaagacttgt cttttttttt cctggagttc  
2820  
ttcccatga ggtcctagga ttgcacacc actgtccac aagagcttcc ctgcctaag  
2880  
aaaggaggtc ttgtggtgtg tgtctctctt cttctctata gtcccgagt tggccccc  
2940  
tgcagcccc accctgtggg tagtctcca gaagtgatgc agtggtgtga gatgccctac  
3000  
accttggtat ttgggagact ttgagagtca ttcacttcca tggtgactag tgtttgttt  
3060  
gcttgatttt atattctgtg ttgcatttct cccactccc tgccctgctt taataaacag  
3120  
caaaccaata tctaggaaga atgactgagg gatagtattg ggtattggcc ccatggcagg  
3180  
aacagccact tgcactggt cccggtgcca cactgagggtg cttggtgtgg ttgtggagcc  
3240  
tgtccctgag cgccttctc ccgttgagcc acgctgtctg gtgggtgatt ctctgccctg  
3300  
agccaccacc ctggactggc ccagtctcca gagctggcac accctgctg tttctcttt  
3360  
ttagacaaa cagccgagt ttggccagcc actaagtcac accagctgag gtccgaggaa  
3420  
agcgggtgta ctcatctccc ttgtccaggg cccgaggaga gtgagggtgc cagcctgcaa  
3480  
agctattcca gctccttggg gttggtttgc aataaattgg tatttaagca gttctgggtc  
3540  
tgcgtgtgac atttgtgct gagacagttc tgtctgtgca tggtcattat tgttgcatc  
3600  
tagccttgag gtcccaggcc aacgtacaca gcaaaccaca gcatggggaa ttcttagggg  
3660  
ttgtttcca tctggtctga atgactggg caagatctca atacagcttt agaaatcctg  
3720  
taagattttg accagtggg agaaaaagaa ttagctata gatcttacat cttttcaaac  
3780  
aggttctgga attctgtagt tactggaaag cttagggtga gtgcagagtt gggaatgatt  
3840  
ccactgaagg gccaccttg cccaccaggc tccaaggccc tccttggctt ccagggtgat  
3900  
acctgctgtt aactttgtg agccctcgca atgggcttcc tccaggacat aacgccgtgt  
3960  
ctgacacaga agtctcccag gtggctggcc acctgcttct tctcagtcga gatctttgac  
4020  
tctctctctc tgtgccacc ccactctcag cctcctctga cctgctcac ccctggggac  
4080  
aggacctagg ggtgtgagaa gtacttggct gaataaagac tgtttcaaag gcaatcctta  
4140  
gaattgccta gcatactccc agggccagaa ataaccgcc agaaaggaga ggcgtatttg  
4200  
ccctgaaga gtgcaggagg gagaacagtt gagaagtgtt ttgtgtggaa atgtgtccaa  
4260  
gaggcgtcag ctgctgcaca gagaactcac tgcccagaac actgcgcttg gggaacagac  
4320  
ctcaccacca cctcaaatct gctctccact gggcctgttg gcagccagct cagctgggga  
4380

agggacagca tgactcgctt tgatgatgaa aagcacgaag ttgtcagcac agaactggc  
 4440  
 cagtccttga gaaactccct ccttggtggt cagaggtcaa gcagcccatg tggcccacgg  
 4500  
 tcctgaagaa ctgggctatg tccctgaggc tcctctctac cgtctgactg tggggtctgg  
 4560  
 ggaacaggca tttaaaccag gctgctgccc tggggagtgc ccactggacg ccagggtgcc  
 4620  
 ccatagggac agggtcacaa agccctgggg cttccctctgc cagtctggtg gaggacagtg  
 4680  
 tggtcactat ctcagagaga cgaaaaatga atattctgtc atttcagact aaactactca  
 4740  
 cccagctcac actaatatgg atttggttaat ttacctttt tttttctttc caactttagg  
 4800  
 ttcaagggtt gttacatggg taaattggat cataggg  
 4837

&lt;210&gt; 5394

&lt;211&gt; 354

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5394

Leu	Tyr	Asp	Gln	Ala	Leu	Leu	Gly	Ile	Leu	Gln	His	Val	Gly	Asn	Val
1			5				10						15		
Gln	Asp	Phe	Leu	Arg	Val	Leu	Phe	Gly	Phe	Leu	Tyr	Arg	Lys	Thr	Asp
			20				25						30		
Phe	Tyr	Arg	Leu	Leu	Arg	His	Pro	Ser	Asp	Arg	Met	Gly	Phe	Pro	Pro
			35				40					45			
Gly	Ala	Ala	Gln	Ala	Leu	Val	Leu	Gln	Val	Phe	Lys	Thr	Phe	Asp	His
			50				55				60				
Met	Ala	Arg	Gln	Asp	Asp	Glu	Lys	Arg	Arg	Gln	Glu	Leu	Glu	Glu	Lys
65				70						75				80	
Ile	Arg	Arg	Lys	Glu	Glu	Glu	Ala	Lys	Thr	Val	Ser	Ala	Ala	Ala	
			85					90					95		
Ala	Glu	Lys	Glu	Pro	Val	Pro	Val	Pro	Val	Gln	Glu	Ile	Glu	Ile	Asp
			100					105					110		
Ser	Thr	Thr	Glu	Leu	Asp	Gly	His	Gln	Glu	Val	Glu	Lys	Val	Gln	Pro
			115				120					125			
Pro	Gly	Pro	Val	Lys	Glu	Met	Ala	His	Gly	Ser	Gln	Glu	Ala	Glu	Ala
			130				135				140				
Pro	Gly	Ala	Val	Ala	Gly	Ala	Ala	Glu	Val	Pro	Arg	Glu	Pro	Pro	Ile
145				150						155				160	
Leu	Pro	Arg	Ile	Gln	Glu	Gln	Phe	Gln	Lys	Asn	Pro	Asp	Ser	Tyr	Asn
			165					170						175	
Gly	Ala	Val	Arg	Glu	Asn	Tyr	Thr	Trp	Ser	Gln	Asp	Tyr	Thr	Asp	Leu
			180					185					190		
Glu	Val	Arg	Val	Pro	Val	Pro	Lys	His	Val	Val	Lys	Gly	Lys	Gln	Val
			195				200					205			
Ser	Val	Ala	Leu	Ser	Ser	Ser	Ser	Ile	Arg	Val	Ala	Met	Leu	Glu	Glu
			210				215				220				
Asn	Gly	Glu	Arg	Val	Leu	Met	Glu	Gly	Lys	Leu	Thr	His	Lys	Ile	Asn
225				230						235				240	
Thr	Glu	Ser	Ser	Leu	Trp	Ser	Leu	Glu	Pro	Gly	Lys	Cys	Val	Leu	Val

				245						250					255				
Asn	Leu	Ser	Lys	Val	Gly	Glu	Tyr	Trp	Trp	Asn	Ala	Ile	Leu	Glu	Gly				
			260					265					270						
Glu	Glu	Pro	Ile	Asp	Ile	Asp	Lys	Ile	Asn	Lys	Glu	Arg	Ser	Met	Ala				
		275					280					285							
Thr	Val	Asp	Glu	Glu	Glu	Gln	Ala	Val	Leu	Asp	Arg	Leu	Thr	Phe	Asp				
	290					295					300								
Tyr	His	Gln	Lys	Leu	Gln	Gly	Lys	Pro	Gln	Ser	His	Glu	Leu	Lys	Val				
305				310					315					320					
His	Glu	Met	Leu	Lys	Gly	Trp	Asp	Ala	Glu	Gly	Ser	Pro	Phe	Arg					
			325				330					335							
Gly	Gln	Arg	Phe	Asp	Pro	Ala	Met	Phe	Asn	Ile	Ser	Pro	Gly	Ala	Val				
		340					345					350							
Gln	Phe																		

&lt;210&gt; 5395

&lt;211&gt; 3711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5395

```

cccggggccc caggagcagt aggtgttagc agcttggtcg cgacagggtgc gctaggtaga
60
gcgcggggac ctgtgacagg gctggttagc gcgcagagga aaggcggctt ttagccaggt
120
atttcagtgt ctgtagacag gatggaatca tctccattta atagacggca atggacctca
180
ctatcattga gggtaacagc caaagaactt tctcttgtca acaagaacaa gtcacggct
240
attgtggaaa tattctccaa gtaccagaaa gcagctgaag aaacaaacat ggagaagaag
300
agaagtaaca ccgaaaatct ctcccagcac ttagaaaagg ggaccctgac tgtgttaaag
360
aagaagtggg agaaccagg gctgggagca gagtctcaca cagactctct acggaacagc
420
agcactgaga ttaggcacag agcagaccat cctcctgctg aagtgacaag ccacgctgct
480
tctggagcca aagctgacca agaagaacaa atccacccca gatctagact caggtcacct
540
cctgaagccc tcgttcaggg tcgatatccc cacatcaagg acggtgagga tcttaaagac
600
cactcaacag aaagtaaaaa aatggaaaat tgtctaggag aatccaggca tgaagtagaa
660
aaatcagaaa tcagtgaata cacagatgct tcgggcaaaa tagagaaata taatgttccg
720
ctgaacaggc ttaagatgat gtttgagaaa ggtgaaccaa ctcaaactaa gattctccgg
780
gcccaaagcc gaagtgaag tggaagggaag atctctgaaa acagctattc tctagatgac
840
ctggaaatag gcccagggtc gttgtcatct tctacatttg actcggagaa aaatgagagt
900
agacgaaatc tggaacttcc acgcctctca gaaacctcta taaaggatcg aatggccaag
960

```

taccaggcag ctgtgtccaa acaaagcagc tcaaccaact atacaaatga gctgaaagcc  
1020  
agtgggtggcg aatcaaaaat tcataaaatg gagcaaaagg agaatgtgcc cccagggtcct  
1080  
gaggtctgca tcacccatca ggaaggggaa aagatttctg caaatgagaa tagcctggca  
1140  
gtccgttcca cccctgccga agatgactcc ccagggtgact cccagggttaa gagtggggt  
1200  
caacagcctg tccatcccaa gccactaagt ccagattcca gagcctccag tctttctgaa  
1260  
agttctcttc ccaaagcaat gaagaagttt caggcacctg caagagagac ctgctggaa  
1320  
tgtcagaaga cagtctatcc aatggagcgt ctcttgcca accagcaggt gtttcacatc  
1380  
agctgcttcc gttgtctcta ttgcaacaac aaactcagtc taggaacata tgcatttta  
1440  
catggaagaa tctattgtaa gcctcacttc aatcaactct ttaaatttaa gggcaactat  
1500  
gatgaaggct ttgggcacag accacacaag gatctatggg caagcaaaaa tgaaaacgaa  
1560  
gagatttttg agagaccagc ccagcttgca aatgcaaggg agaccctca cagcccaggg  
1620  
gtagaagatg cccctattgc taagggtggg gtccctggctg caagtatgga agccaaggcc  
1680  
tcctctcagc aggagaagga agacaagcca gctgaaacca agaagctgag gatcgcttgg  
1740  
ccacccccca ctgaacttgg aagttcagga agtgccctgg aggaagggat caaatgtca  
1800  
aagcccaa at ggctctctga agacgaaatc agcaagcccg aagttcctga ggatgtcgat  
1860  
ctagatctga agaagctaag acgatcttct tcaactgaagg aaagaagccg cccattcact  
1920  
gtagcagctt catttcaaag cacctctgtc aagagcccaa aaactgtgtc cccacctatc  
1980  
aggaaaggct ggagcatgtc agagcagagt gaagagtctg tgggtggaag agttgcagaa  
2040  
aggaaacaag tggaaaatgc caaggcttct aagaagaatg ggaatgtggg aaaaacaacc  
2100  
tggcaaaaaca aagaatctaa aggagagaca gggaagagaa gtaaggaagg tcatagtttg  
2160  
gagatggaga atgagaatct tgtagaaaat ggtgcagact ccgatgaaga tgataacagc  
2220  
ttctctaaac aacaatctcc acaagaacct aagctctctga attggctgag tttttagagc  
2280  
aacacctttg ctgaagaatt cactactcag aatcagaaat cccaggatgt ggaactctgg  
2340  
gagggagaag tggtaaaaga gctctctgtg gaagaacaga taaagagaaa tcggtattat  
2400  
gatgaggatg aggatgaaga gtgacaaatt gcaatgatgc tgggccttaa attcatgtta  
2460  
gtgttagcga gccactgccc ttgtcaaaa tgtgatgcac ataagcaggt atcccagcat  
2520  
gaaatgta at ttacttgaa gtaactttgg aaaagaatc cttcttaaaa tcaaaaacaa  
2580

aacaaaaaaaa cacaacaaac acattctaaa tactagagat aactttactt aaattcttca  
 2640  
 ttttagcagt gatgatatgc ataagtgtg taaggcttgt aactggggaa atattccacc  
 2700  
 tgataatagc ccagattcta ctgtattccc aaaaggcaat attaaggtag atagatgatt  
 2760  
 agtagtatat tgttacacac ttttttgaa ttagagaaca tacagaagga atttaggggc  
 2820  
 ttaaaccatta cgactgaatg cacttttagta taaagggcac agtttgata tttttaaatg  
 2880  
 aataccaatt taatttttta gtatttacct gttaagagat ttttagtct ttaaattttt  
 2940  
 taggttaatt ttcttgctgt gatatatatg aggaatttac tactttatgt cctgctctct  
 3000  
 aaactacatc ctgaactcga cgtcctgagg tataatacaa cagagcactt tttgaggcaa  
 3060  
 ttgaaaaacc aacctacact ctccggtgct tagagagatc tgctgtctcc caaataagct  
 3120  
 tttgtatctg ccagtgaatt tactgtactc caaatgattg ctttcttttc tggatgatc  
 3180  
 tgtgcttctc ataattactg aaagctgcaa ttttttagta atacctcgg gatcactgtc  
 3240  
 ccccatcttc cgtgttagag caaagtgaag agtttaaagg aggaagaaga aagaactgtc  
 3300  
 ttacaccact tgagctcaga cctctaaacc ctgtatttcc cttatgatgt ccccttttgc  
 3360  
 agacactaat ttttaaatac ttactagctc tgaaatatat tgatttttat cacagtatc  
 3420  
 tcagggtgaa attaaaccaa ctataggcct ttttcttggg atgattttct agtcttaagg  
 3480  
 tttggggaca ttataaactt gactacattt gttgtacaca gttgatattc caaattgtat  
 3540  
 ggatggggagg gagagggtgc ttaagctgta ggcttttctt tgtactgcat ttatagagat  
 3600  
 ttagctttaa ttttttttag agatgtaaaa cattctgctt tcttagtctt acctagtctg  
 3660  
 aaacattttt attcaataaa gattttaatt aaaatttgaa aaaaaaaaa a  
 3711

&lt;210&gt; 5396

&lt;211&gt; 760

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5396

Met	Glu	Ser	Ser	Pro	Phe	Asn	Arg	Arg	Gln	Trp	Thr	Ser	Leu	Ser	Leu
1				5					10				15		
Arg	Val	Thr	Ala	Lys	Glu	Leu	Ser	Leu	Val	Asn	Lys	Asn	Lys	Ser	Ser
			20					25					30		
Ala	Ile	Val	Glu	Ile	Phe	Ser	Lys	Tyr	Gln	Lys	Ala	Ala	Glu	Glu	Thr
		35					40					45			
Asn	Met	Glu	Lys	Lys	Arg	Ser	Asn	Thr	Glu	Asn	Leu	Ser	Gln	His	Phe
	50					55					60				
Arg	Lys	Gly	Thr	Leu	Thr	Val	Leu	Lys	Lys	Lys	Trp	Glu	Asn	Pro	Gly

65                                      70                                      75                                      80  
 Leu Gly Ala Glu Ser His Thr Asp Ser Leu Arg Asn Ser Ser Thr Glu  
    85                                      90                                      95  
 Ile Arg His Arg Ala Asp His Pro Pro Ala Glu Val Thr Ser His Ala  
    100                                      105                                      110  
 Ala Ser Gly Ala Lys Ala Asp Gln Glu Glu Gln Ile His Pro Arg Ser  
    115                                      120                                      125  
 Arg Leu Arg Ser Pro Pro Glu Ala Leu Val Gln Gly Arg Tyr Pro His  
    130                                      135                                      140  
 Ile Lys Asp Gly Glu Asp Leu Lys Asp His Ser Thr Glu Ser Lys Lys  
 145                                      150                                      155                                      160  
 Met Glu Asn Cys Leu Gly Glu Ser Arg His Glu Val Glu Lys Ser Glu  
    165                                      170                                      175  
 Ile Ser Glu Asn Thr Asp Ala Ser Gly Lys Ile Glu Lys Tyr Asn Val  
    180                                      185                                      190  
 Pro Leu Asn Arg Leu Lys Met Met Phe Glu Lys Gly Glu Pro Thr Gln  
    195                                      200                                      205  
 Thr Lys Ile Leu Arg Ala Gln Ser Arg Ser Ala Ser Gly Arg Lys Ile  
    210                                      215                                      220  
 Ser Glu Asn Ser Tyr Ser Leu Asp Asp Leu Glu Ile Gly Pro Gly Gln  
 225                                      230                                      235                                      240  
 Leu Ser Ser Ser Thr Phe Asp Ser Glu Lys Asn Glu Ser Arg Arg Asn  
    245                                      250                                      255  
 Leu Glu Leu Pro Arg Leu Ser Glu Thr Ser Ile Lys Asp Arg Met Ala  
    260                                      265                                      270  
 Lys Tyr Gln Ala Ala Val Ser Lys Gln Ser Ser Ser Thr Asn Tyr Thr  
    275                                      280                                      285  
 Asn Glu Leu Lys Ala Ser Gly Gly Glu Ile Lys Ile His Lys Met Glu  
    290                                      295                                      300  
 Gln Lys Glu Asn Val Pro Pro Gly Pro Glu Val Cys Ile Thr His Gln  
 305                                      310                                      315                                      320  
 Glu Gly Glu Lys Ile Ser Ala Asn Glu Asn Ser Leu Ala Val Arg Ser  
    325                                      330                                      335  
 Thr Pro Ala Glu Asp Asp Ser Pro Gly Asp Ser Gln Val Lys Ser Glu  
    340                                      345                                      350  
 Val Gln Gln Pro Val His Pro Lys Pro Leu Ser Pro Asp Ser Arg Ala  
    355                                      360                                      365  
 Ser Ser Leu Ser Glu Ser Ser Pro Pro Lys Ala Met Lys Lys Phe Gln  
    370                                      375                                      380  
 Ala Pro Ala Arg Glu Thr Cys Val Glu Cys Gln Lys Thr Val Tyr Pro  
 385                                      390                                      395                                      400  
 Met Glu Arg Leu Leu Ala Asn Gln Gln Val Phe His Ile Ser Cys Phe  
    405                                      410                                      415  
 Arg Cys Ser Tyr Cys Asn Asn Lys Leu Ser Leu Gly Thr Tyr Ala Ser  
    420                                      425                                      430  
 Leu His Gly Arg Ile Tyr Cys Lys Pro His Phe Asn Gln Leu Phe Lys  
    435                                      440                                      445  
 Ser Lys Gly Asn Tyr Asp Glu Gly Phe Gly His Arg Pro His Lys Asp  
    450                                      455                                      460  
 Leu Trp Ala Ser Lys Asn Glu Asn Glu Glu Ile Leu Glu Arg Pro Ala  
 465                                      470                                      475                                      480  
 Gln Leu Ala Asn Ala Arg Glu Thr Pro His Ser Pro Gly Val Glu Asp  
    485                                      490                                      495  
 Ala Pro Ile Ala Lys Val Gly Val Leu Ala Ala Ser Met Glu Ala Lys

```
<210> 5397
<211> 561
<212> DNA
<213> Homo sapiens
```

4580



ggtttgaaga ggagagcaga ccacccagag tagtgggaga aagcaccggc agaaaagctg  
 480  
 gcatatccac cgagggcctc tctgcttett ttgacctttt tcagagtttc agagttatga  
 540  
 accaaatcgc cttcatgaga g  
 561

<210> 5398

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5398

Met	Ala	Leu	Gly	Ser	Thr	Trp	Thr	Pro	Glu	His	Lys	Thr	Gly	Gly	Arg
1			5					10					15		
Asp	Ala	Ile	His	Ser	Ala	Gly	Thr	Tyr	Ala	His	Asp	Gln	Leu	Ser	Gln
			20					25				30			
Thr	Ser	Ile	Pro	Ile	Ser	Pro	Pro	Leu	Thr	Pro	Gln	Asp	Ala	Asn	Glu
			35					40				45			
Ala	Gln	Gly	Trp	Ala	Glu	Ala	Gly	Arg	Ala	Val	His	Arg	Glu	Asp	Pro
			50				55				60				
Arg	Val	Ser	Leu	Gly	Leu	Pro	Arg	Trp	Leu	Cys	Pro	Pro	Phe	Cys	Leu
65					70					75				80	
Gly	Gly	Ser	Leu	Arg	Leu	Gly	Arg	Ala	Gln	Arg	Glu	Gly	Asp	Pro	Glu
			85						90				95		
Gly	Leu	Ala	Asp	Ser	Gly	Pro	Pro	Cys	Glu	Leu	Arg	Phe	Glu	Glu	Glu
			100					105				110			
Ser	Arg	Pro	Pro	Arg	Val	Val	Gly	Glu	Ser	Thr	Gly	Arg	Lys	Ala	Gly
			115				120					125			
Ile	Ser	Thr	Glu	Gly	Leu	Ser	Ala	Ser	Phe	Asp	Leu	Phe	Gln	Ser	Phe
			130				135					140			
Arg	Val	Met	Asn	Gln	Ile	Ala	Phe	Met	Arg						
145						150									

<210> 5399

<211> 835

<212> DNA

<213> Homo sapiens

<400> 5399

ncggccgcgc aacaaaggag tcacccggcg atgagccccg gcacccccgg accgaccatg  
 60  
 ggcagatccc agggcagccc aatggatcca atggtgatga agagacctca gttgtatggc  
 120  
 atgggcagta accctcattc tcagcctcag cagagcagtc cgtacccagg aggttcctat  
 180  
 ggccctccag gccacagcg gtatccaatt ggcattccagg gtcggactcc cggggccatg  
 240  
 gccggaatgc agtacctca gcagcagatg ccacctcagt atggacagca aggtgtgagt  
 300  
 ggttactgcc agcagggcca acagccatat tacagccagc agccgcagcc cccgcacctc  
 360  
 ccacccagg cgcagtatct gccgteccag tccagcaga ggtaccagcc gcagcaggac  
 420

atgtctcagg aaggctatgg aactagatct caacctctc tggcccccg aaaacctaac  
 480  
 catgaagact tgaacttaac acagcaagaa agaccatcaa gttaccagt aagacattat  
 540  
 tgtgctgatt tggaaatgta atgagttaaa gactttttaga aagagctggt gtttttggtt  
 600  
 gttctacttt atattatgac atgattgaga agtttctaga cttcagggtt attttggtgt  
 660  
 caatttttca aggtttacct tttaggagct ctgtagtctt ggataagtct atttcatgtg  
 720  
 tatatatctc tgttgacagag tgtagacatc agttggaagg ttttatgcgg ctggctgatt  
 780  
 ttgtgtgcag gtgggtattg ctgccaaaaa gcaacagcct aaagaaagct caact  
 835

<210> 5400

<211> 186

<212> PRT

<213> Homo sapiens

<400> 5400

Xaa	Ala	Ala	Gln	Gln	Arg	Ser	His	Pro	Ala	Met	Ser	Pro	Gly	Thr	Pro
1			5					10					15		
Gly	Pro	Thr	Met	Gly	Arg	Ser	Gln	Gly	Ser	Pro	Met	Asp	Pro	Met	Val
	20						25					30			
Met	Lys	Arg	Pro	Gln	Leu	Tyr	Gly	Met	Gly	Ser	Asn	Pro	His	Ser	Gln
	35						40				45				
Pro	Gln	Gln	Ser	Ser	Pro	Tyr	Pro	Gly	Gly	Ser	Tyr	Gly	Pro	Pro	Gly
	50					55					60				
Pro	Gln	Arg	Tyr	Pro	Ile	Gly	Ile	Gln	Gly	Arg	Thr	Pro	Gly	Ala	Met
65					70					75				80	
Ala	Gly	Met	Gln	Tyr	Pro	Gln	Gln	Gln	Met	Pro	Pro	Gln	Tyr	Gly	Gln
			85						90					95	
Gln	Gly	Val	Ser	Gly	Tyr	Cys	Gln	Gln	Gly	Gln	Gln	Pro	Tyr	Tyr	Ser
		100							105				110		
Gln	Gln	Pro	Gln	Pro	Pro	His	Leu	Pro	Pro	Gln	Ala	Gln	Tyr	Leu	Pro
		115					120					125			
Ser	Gln	Ser	Gln	Gln	Arg	Tyr	Gln	Pro	Gln	Gln	Asp	Met	Ser	Gln	Glu
	130					135					140				
Gly	Tyr	Gly	Thr	Arg	Ser	Gln	Pro	Pro	Leu	Ala	Pro	Gly	Lys	Pro	Asn
145					150					155				160	
His	Glu	Asp	Leu	Asn	Leu	Ile	Gln	Gln	Glu	Arg	Pro	Ser	Ser	Leu	Pro
			165						170					175	
Val	Arg	His	Tyr	Cys	Ala	Asp	Leu	Glu	Met						
			180						185						

<210> 5401

<211> 2674

<212> DNA

<213> Homo sapiens

<400> 5401

nccctttcaa aagaagggtgc ccccgccctt ggcccggtggg taacgccatt taaggcccg  
 60

ccccgggaat tttgggccag gtgtaagcgc ccgtgtcccc gccacgtcgc ggacatgggtg  
120  
atttcagaaa gtatggatat actcttcaga ataagaggag gccttgattt ggcttttcag  
180  
ctagctactc ctaatgaaat ttttctcaag aaggcactga aacatgtgtt gagtgcctg  
240  
tcaactaagc tgtcttcaaa cgccttctgtg ttcagaattt gccacagttc agtgtatata  
300  
tggcctagca gtgacataaa caccattcct ggagaactga ctgatgcttc tgcttgtaag  
360  
aacatactgc gctttattca atttgagcca gaagaagata taaaaagaaa attcatgaga  
420  
aagaaggaca aaaagttatc agacatgcat caaatagtaa atatagatct tatgctggaa  
480  
atgtcaacct ccctggcagc tgtaacgccc atcattgaaa gggaaagcgg aggacaccat  
540  
tatgttaata tgactttacc tgtcgatgca gttatatctg ttgctccaga agaaacatgg  
600  
ggaaaagtgc gtaagctcct ggttgatgca attcataatc aactaactga catggaaaaa  
660  
tgtattttga aatatatgaa aagaacatct atttgtgtcc ctgaaccact gcacttttta  
720  
ttaccaggga aaaaaaatct tgtaacaatt tcatatcctt caggaatacc agatggccag  
780  
ctgcaggcct ataggaagga gttacatgat cttttcaatc tgcttcacga cagaccctat  
840  
ttcaaaaggt ctaatgctta tcaactttcca gatgagccat acaaagatgg ttacattaga  
900  
aatccacata cttaccttaa tccacctaac atggagactg gtatgattta tgtggtccag  
960  
ggcatatatg gctatcatca ttatatgcag gatcgcatag atgacaatgg ctggggctgt  
1020  
gcttatcgat ctctgcagac tatctgctct tggttcaaac atcagggata cacagagagg  
1080  
tccattccaa cacacagaga aattcagcag gctctagtcg atgccgggga caaaccagca  
1140  
acatttgtcg gatcgcgga atggattgga tctattgagg tgcagctggt actaaaccaa  
1200  
ttgatcggta taacgtcaaa aatcctgttt gtcagccaag gttcagaaat tgcctctcaa  
1260  
ggacgggaac tggetaatca tttccaaagt gaaggaactc cagttatgat cgggggagga  
1320  
gttttgccc acacaatact aggagttgca tggaatgaga ttacagggca gataaagttt  
1380  
ctgattctag atccacatta taccggtgct gaagacctgc aagttatttt ggaaaagggc  
1440  
tgggtcggat ggaagggccc agatttttgg aacaaggatg catactataa cttatgtctt  
1500  
cctcagcgac caaatatgat ttaaaatatc ttggagtcaa agactgcagt agagtggat  
1560  
tataaatttg tgaataaaga atcagtttaa tttttcacat taaatcctgg ttctagtttg  
1620  
accatttaaa ttatgacctt tttcaaaggt tgtaataact gcacggagaa tgtattttta  
1680

gacgttcctt taataactta aaagacaaag catacacaac cagcatatta taggcatgta  
 1740  
 aatacatgtg ttcttaaatg gatcttcact tggaagaaag tttttcgccc ttctcagaag  
 1800  
 gagattagac acaacatatg gtaaagccaa aagcaggagc ttatagattt gcatgaaatg  
 1860  
 aaggcggttct tcagacttct tcataaccca cgtgacatct gtttttaaaa acacgttaac  
 1920  
 attaaaaact tttttttaa aagagtttta tccccaaact tccaccatgc agtcccattt  
 1980  
 ttggtctcta gactctggta agtataacca gtactaaaat gttaatgaga atgaaacaat  
 2040  
 actactagaa atacgagtgt cagtattaaa tggaataata aatgctatgc aaacaagaga  
 2100  
 tcactgcggg aggaaaaaag cagcagctct gagttactta ccagcacttc cttttccac  
 2160  
 tggatatttc tacacttccg agactccgtt tctgtctgag cacggcaaca caatcattcc  
 2220  
 tgtcagggtg ttcacttgct tttattgtct gcatacatct aattgttgta agaaacttgg  
 2280  
 cacagtctgg aaatccacat gaccaagcga gatcttcagc tgtttgcccg ttcttattac  
 2340  
 ataaactgaa aacaggataa aaacggagtg aatgaaaca ttgaacttaa gtctttttt  
 2400  
 tatatcttac aagggaattt tgggctcata caaatgttgg ttgcagaaca gaagaggtaa  
 2460  
 aggatgcata aggaaattgc attttggtc actattgtat cctcagcaac taacagaatc  
 2520  
 cagcatagag cgggcattcc agttctgaat gaatgttaga attatctgat gtttaataca  
 2580  
 gtgtatgagt acccaaaggt agtcaatggg aactatagaa tgggttttcc tgaaccgaaa  
 2640  
 ctgaagtaga atacagtcac aatgaacaaa attg  
 2674

&lt;210&gt; 5402

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5402

Xaa	Leu	Ser	Lys	Glu	Gly	Ala	Pro	Ala	Leu	Gly	Pro	Trp	Val	Thr	Pro
1				5					10					15	
Phe	Lys	Ala	Arg	Pro	Arg	Glu	Phe	Trp	Ala	Arg	Cys	Lys	Arg	Pro	Cys
			20					25					30		
Pro	Arg	His	Val	Ala	Asp	Met	Val	Ile	Ser	Glu	Ser	Met	Asp	Ile	Leu
			35				40					45			
Phe	Arg	Ile	Arg	Gly	Gly	Leu	Asp	Leu	Ala	Phe	Gln	Leu	Ala	Thr	Pro
			50			55					60				
Asn	Glu	Ile	Phe	Leu	Lys	Lys	Ala	Leu	Lys	His	Val	Leu	Ser	Asp	Leu
			65			70				75				80	
Ser	Thr	Lys	Leu	Ser	Ser	Asn	Ala	Leu	Val	Phe	Arg	Ile	Cys	His	Ser
			85						90					95	
Ser	Val	Tyr	Ile	Trp	Pro	Ser	Ser	Asp	Ile	Asn	Thr	Ile	Pro	Gly	Glu

100	105	110
Leu Thr Asp Ala Ser Ala Cys Lys Asn Ile Leu Arg Phe Ile Gln Phe		
115	120	125
Glu Pro Glu Glu Asp Ile Lys Arg Lys Phe Met Arg Lys Lys Asp Lys		
130	135	140
Lys Leu Ser Asp Met His Gln Ile Val Asn Ile Asp Leu Met Leu Glu		
145	150	155
Met Ser Thr Ser Leu Ala Val Thr Pro Ile Ile Glu Arg Glu Ser		
165	170	175
Gly Gly His His Tyr Val Asn Met Thr Leu Pro Val Asp Ala Val Ile		
180	185	190
Ser Val Ala Pro Glu Glu Thr Trp Gly Lys Val Arg Lys Leu Leu Val		
195	200	205
Asp Ala Ile His Asn Gln Leu Thr Asp Met Glu Lys Cys Ile Leu Lys		
210	215	220
Tyr Met Lys Arg Thr Ser Ile Val Val Pro Glu Pro Leu His Phe Leu		
225	230	235
Leu Pro Gly Lys Lys Asn Leu Val Thr Ile Ser Tyr Pro Ser Gly Ile		
245	250	255
Pro Asp Gly Gln Leu Gln Ala Tyr Arg Lys Glu Leu His Asp Leu Phe		
260	265	270
Asn Leu Pro His Asp Arg Pro Tyr Phe Lys Arg Ser Asn Ala Tyr His		
275	280	285
Phe Pro Asp Glu Pro Tyr Lys Asp Gly Tyr Ile Arg Asn Pro His Thr		
290	295	300
Tyr Leu Asn Pro Pro Asn Met Glu Thr Gly Met Ile Tyr Val Val Gln		
305	310	315
Gly Ile Tyr Gly Tyr His His Tyr Met Gln Asp Arg Ile Asp Asp Asn		
325	330	335
Gly Trp Gly Cys Ala Tyr Arg Ser Leu Gln Thr Ile Cys Ser Trp Phe		
340	345	350
Lys His Gln Gly Tyr Thr Glu Arg Ser Ile Pro Thr His Arg Glu Ile		
355	360	365
Gln Gln Ala Leu Val Asp Ala Gly Asp Lys Pro Ala Thr Phe Val Gly		
370	375	380
Ser Arg Gln Trp Ile Gly Ser Ile Glu Val Gln Leu Val Leu Asn Gln		
385	390	395
Leu Ile Gly Ile Thr Ser Lys Ile Leu Phe Val Ser Gln Gly Ser Glu		
405	410	415
Ile Ala Ser Gln Gly Arg Glu Leu Ala Asn His Phe Gln Ser Glu Gly		
420	425	430
Thr Pro Val Met Ile Gly Gly Gly Val Leu Ala His Thr Ile Leu Gly		
435	440	445
Val Ala Trp Asn Glu Ile Thr Gly Gln Ile Lys Phe Leu Ile Leu Asp		
450	455	460
Pro His Tyr Thr Gly Ala Glu Asp Leu Gln Val Ile Leu Glu Lys Gly		
465	470	475
Trp Cys Gly Trp Lys Gly Pro Asp Phe Trp Asn Lys Asp Ala Tyr Tyr		
485	490	495
Asn Leu Cys Leu Pro Gln Arg Pro Asn Met Ile		
500	505	

&lt;210&gt; 5403

&lt;211&gt; 451

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5403

gcgccttccc cctcgacggc gccagctcct cggcctctag ctccaggatg tgctcgctccg  
 60  
 cacgcgctag ttccgcgtgc tggatcaggc tcaggatctc cagcactgac aatggctcct  
 120  
 tcattcttgg gggctctggg accttgggtg ggggctctgg agctgcctcg cctgcaggca  
 180  
 ccactctctc agccaggac gcacgtgagg gctntggatc cacgccccag tctcaggaag  
 240  
 gccagtctcc gggcgccctc ccccgctgcc tctctgctgc cgtgggctcg ggtcccatgc  
 300  
 agccggggcca ggaggccaaa atctgctgag ctctgcgta tcctgggtac cagcacacgg  
 360  
 cccaagaaaag agcggggctg cccatcccca gggctgcctg ccgcccggccc gggggccaggc  
 420  
 ccagccggaa gggggccagg cccgcaagct t  
 451

&lt;210&gt; 5404

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5404

Ala	Pro	Ser	Pro	Ser	Thr	Ala	Pro	Ala	Pro	Arg	Pro	Leu	Ala	Pro	Gly
1				5					10					15	
Cys	Ala	Arg	Pro	His	Ala	Leu	Val	Arg	Ala	Ala	Gly	Ser	Gly	Ser	Gly
			20					25					30		
Ser	Pro	Ala	Leu	Thr	Met	Ala	Pro	Ser	Ser	Leu	Gly	Ala	Leu	Gly	Pro
			35				40					45			
Trp	Val	Gly	Ala	Leu	Glu	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Leu	Ser	Gln
	50					55				60					
Pro	Gly	Thr	His	Ala	Gly	Ala	Xaa	Asp	Pro	Arg	Pro	Ser	Leu	Arg	Lys
65				70				75						80	
Ala	Ser	Leu	Arg	Ala	Ala	Ser	Pro	Ala	Ala	Ser	Ser	Ser	Pro	Trp	Ala
			85					90						95	
Arg	Val	Pro	Cys	Ser	Arg	Ala	Arg	Arg	Pro	Lys	Ser	Ala	Glu	Leu	Leu
			100				105						110		
Arg	Ile	Pro	Gly	Thr	Ser	Thr	Arg	Pro	Lys	Lys	Glu	Arg	Gly	Cys	Pro
	115					120					125				
Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gly	Pro	Gly	Pro	Ser	Pro	Ala	Gly	Arg
	130					135					140				
Gly	Pro	Gly	Pro	Gln	Ala										
145					150										

&lt;210&gt; 5405

&lt;211&gt; 1609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5405

atattggcag aattggaagc aaatgtacct ggagcgcagg tacttggtta tcaaataatg  
60  
cctggatttc ttaatatgaa gataaagttt gtgtgcgccc agtgtctgag aaacgggtcaa  
120  
gtcattgaac cagacaaaaa cagaaaatat tgtagtgcaa aagcaaggca ttcgtggacc  
180  
aaagaccggc gtgcgatgag agtgatgtct attgaacgta agaagtggat gaacatccgt  
240  
cctctcccca caaagaaaca aatgccttta cagtttgatc tgtgcaacca tattgcttct  
300  
gggaaaaaat gtcaatatgt gggaaactgt tcctttgctc atagtccctga ggaaagagaa  
360  
gtttggactt acatgaagga gaatgggata caagatatgg agcaatttta cgaactatgg  
420  
ctcaagagtc aaaaaaatga aaaaagtga gacatagcca gtcagtcaaa caaggaaaat  
480  
ggaaaacaaa ttcacatgcc aacagattat gctgaagtta cagtggactt tcaactgctg  
540  
atgtgtggga aaaactgcaa cagtgagaag cagtggcagg gccacatctc ctccgagaag  
600  
cacaagaga aggttttcca caccgaggac gaccagtact gctggcagca ccgcttccca  
660  
acaggctatt tcagtatttg tgataggtat atgaatggca cctgcccaga aggaaacagc  
720  
tgtaaatltg cacatggaaa tgccgaactt catgaatggg aagaaagaag agatgcccta  
780  
aagatgaagc tcaacaaagc acgaaaagat cacttaattg gcccaaatga taatgacttt  
840  
ggaaaatata gttttttgtt taaagattta aactaatatg ctggctttta tgtatgatac  
900  
ctaatacagag cattgaccag aaaaattgaa agtgttctga ggcacatagc agaggagctg  
960  
cagatttcct gcttgatttg gcgtatatcg ttcctctga gcagcaaccc acagtaggta  
1020  
ggaaaatggg ctgtttcaca ggccctggcca cgctctcacg gaaccactgg catcagatgg  
1080  
tgaagtgact gctacccggg tgccatctgt tgaacagact tttggatgaa gtgtgttggg  
1140  
gaagaggata aggttatatc taggacaact ctttgagttg gtccttcata taagaatcgt  
1200  
gacggtaaga gaataaacac ttgtactggg atcagaatac atgatggatg aaattcttta  
1260  
catgttttag cagaatgaat ttgtttaata taataaagtt tgctacttat ctgtatgtag  
1320  
gttgctaaaa aggattttct taactcagat ttttaagcaa ataaccattt aacactagta  
1380  
tttgttaaat ggggtatttt tctgtatttg tatgtttcac tataataagg gaattaagga  
1440  
taatgtgcat tgagaatatt ttgaaaaata attgactcaa attttatttc ttggtctttt  
1500  
gctgttttaa tgatgatttt gaaagattaa acctgtactg ttggtattgt gttagtgtat  
1560  
ggaccaatac tgccgtgaat aaagatttta tatataaaaa aaaaaaaaaa  
1609

<210> 5406  
 <211> 291  
 <212> PRT  
 <213> Homo sapiens

<400> 5406  
 Ile Leu Ala Glu Leu Glu Ala Asn Val Pro Gly Ala Gln Val Leu Gly  
 1 5 10 15  
 Asn Gln Ile Met Pro Gly Phe Leu Asn Met Lys Ile Lys Phe Val Cys  
 20 25 30  
 Ala Gln Cys Leu Arg Asn Gly Gln Val Ile Glu Pro Asp Lys Asn Arg  
 35 40 45  
 Lys Tyr Cys Ser Ala Lys Ala Arg His Ser Trp Thr Lys Asp Arg Arg  
 50 55 60  
 Ala Met Arg Val Met Ser Ile Glu Arg Lys Lys Trp Met Asn Ile Arg  
 65 70 75 80  
 Pro Leu Pro Thr Lys Lys Gln Met Pro Leu Gln Phe Asp Leu Cys Asn  
 85 90 95  
 His Ile Ala Ser Gly Lys Lys Cys Gln Tyr Val Gly Asn Cys Ser Phe  
 100 105 110  
 Ala His Ser Pro Glu Glu Arg Glu Val Trp Thr Tyr Met Lys Glu Asn  
 115 120 125  
 Gly Ile Gln Asp Met Glu Gln Phe Tyr Glu Leu Trp Leu Lys Ser Gln  
 130 135 140  
 Lys Asn Glu Lys Ser Glu Asp Ile Ala Ser Gln Ser Asn Lys Glu Asn  
 145 150 155 160  
 Gly Lys Gln Ile His Met Pro Thr Asp Tyr Ala Glu Val Thr Val Asp  
 165 170 175  
 Phe His Cys Trp Met Cys Gly Lys Asn Cys Asn Ser Glu Lys Gln Trp  
 180 185 190  
 Gln Gly His Ile Ser Ser Glu Lys His Lys Glu Lys Val Phe His Thr  
 195 200 205  
 Glu Asp Asp Gln Tyr Cys Trp Gln His Arg Phe Pro Thr Gly Tyr Phe  
 210 215 220  
 Ser Ile Cys Asp Arg Tyr Met Asn Gly Thr Cys Pro Glu Gly Asn Ser  
 225 230 235 240  
 Cys Lys Phe Ala His Gly Asn Ala Glu Leu His Glu Trp Glu Glu Arg  
 245 250 255  
 Arg Asp Ala Leu Lys Met Lys Leu Asn Lys Ala Arg Lys Asp His Leu  
 260 265 270  
 Ile Gly Pro Asn Asp Asn Asp Phe Gly Lys Tyr Ser Phe Leu Phe Lys  
 275 280 285  
 Asp Leu Asn  
 290

<210> 5407  
 <211> 2010  
 <212> DNA  
 <213> Homo sapiens

<400> 5407  
 ataaaaggga gaggagcgaa catggcagcg cgttggcggt ttgtgtgtgt ctctgtgacc  
 60



atggtggtgg cgctgctcat cgtttgcgac gttccctcag cctctgceca aagaaagaag  
120  
gagatggtgt tatctgaaaa ggtagtcag ctgatggaat ggactaaca aagacctgta  
180  
ataagaatga atggagacaa gttccgtcgc cttgtgaaag cccaccgag aaattactcc  
240  
gttatcgta tgttcaactgc tctccaactg catagacagt gtgtcgtttg caagcaagct  
300  
gatgaagaat tccagatcct ggcaaaactcc tggcgatact ccagtgcatt caccaacagg  
360  
atattttttg ccatggtgga ttttgatgaa ggctctgatg tatttcagat gctaaacatg  
420  
aattcagctc caactttcat caactttcct gcaaaaggga aacccaaacg gggatgata  
480  
tatgagttac aggtgcgggg tttttcagct gagcagattg cccggtggat cgccgacaga  
540  
actgatgtca atattagagt gattagacct ccaaattatg ctgggtccct tatgttggga  
600  
ttgcttttgg ctgttattgg tggacttgg tatcttcgaa gaagtaatat ggaatttctc  
660  
tttaataaaa ctggatgggc ttttgcagct ttgtgttttg tgcttgctat gacatctggt  
720  
caaagtgtga accatataag aggaccacca tatgcccata agaatcccca cacgggacat  
780  
gtgaattata tccatggaag cagtcaagcc cagttttagt ctgaaacaca cattgttctt  
840  
ctgtttaatg gtggagttac cttaggaatg gtgcttttat gtgaagctgc tacctctgac  
900  
atggatattg gaaagcgaaa gataatgtgt gtggctggta ttggacttgt tgtattatc  
960  
ttcagttgga tgctctctat ttttagatct aaatatcatg gctaccata cagctttctg  
1020  
atgagttaaa aagggtccag agatatatag acactggagt actggaaatt gaaaaacgaa  
1080  
aatcggtgtg gtttgaaaag aagaatgcaa cttgtatatt ttgtattacc tcttttttct  
1140  
aagtgattta aatagttaat catttaacca aagaagatgt gtagtgcctt aacaagcaat  
1200  
cctctgtcaa aatctgaggt atttgaaaat aattatcctc ttaaccttct cttcccagtg  
1260  
aactttatgg aacatttaat ttagtacaat taagtatatt ataaagatac tatgactgcc  
1320  
acctgccatt taccttctaa taacctgcc atgtgggttg cagaaagaga tggatatag  
1380  
agcctcagaa gaaatatttt atgtgggttt tttgttttct gttactagat ttcattggatg  
1440  
aggggatatg gttgacctt tactttttaa tggagcagcc agtttttgg aattactcac  
1500  
ttgtaaattg tgagattctg aattccttac ctgctattct tgtacttgc tcaggccaaa  
1560  
tctatgctgt ggttcttatg agacttgat gaagatgcc tgatttgatc agattgacca  
1620  
cggaatact actgccatgt aatctgtata gttccagata atttgtcatg aacattgaca  
1680

gaatgacaat tttttgtatt tgctttttct ccctttaaga gcacattctt ctgtaaggag  
 1740  
 aaagcgagca ttctggctaa aatgtgtaga aggtaattta ctacacttat aaaatagtgt  
 1800  
 gacttttgtg aaaattttga attagctttc atatgaagtg ccttaagtag actcttcatt  
 1860  
 tacttttctg gtaatggttt aaatatcatt tgttatgcat ttttaagata cagttcagaa  
 1920  
 tgacacattg tagtggcaaa gataaccaaa tgtctggctg tttgcttttt gaccatatca  
 1980  
 ataaactttt acaatctaaa aaaaaaaaaa  
 2010

&lt;210&gt; 5408

&lt;211&gt; 335

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5408

Met	Ala	Ala	Arg	Trp	Arg	Phe	Trp	Cys	Val	Ser	Val	Thr	Met	Val	Val
1			5					10					15		
Ala	Leu	Leu	Ile	Val	Cys	Asp	Val	Pro	Ser	Ala	Ser	Ala	Gln	Arg	Lys
	20						25						30		
Lys	Glu	Met	Val	Leu	Ser	Glu	Lys	Val	Ser	Gln	Leu	Met	Glu	Trp	Thr
	35					40					45				
Asn	Lys	Arg	Pro	Val	Ile	Arg	Met	Asn	Gly	Asp	Lys	Phe	Arg	Arg	Leu
	50				55					60					
Val	Lys	Ala	Pro	Pro	Arg	Asn	Tyr	Ser	Val	Ile	Val	Met	Phe	Thr	Ala
65					70				75					80	
Leu	Gln	Leu	His	Arg	Gln	Cys	Val	Val	Cys	Lys	Gln	Ala	Asp	Glu	Glu
			85						90					95	
Phe	Gln	Ile	Leu	Ala	Asn	Ser	Trp	Arg	Tyr	Ser	Ser	Ala	Phe	Thr	Asn
	100						105						110		
Arg	Ile	Phe	Phe	Ala	Met	Val	Asp	Phe	Asp	Glu	Gly	Ser	Asp	Val	Phe
	115					120						125			
Gln	Met	Leu	Asn	Met	Asn	Ser	Ala	Pro	Thr	Phe	Ile	Asn	Phe	Pro	Ala
	130					135						140			
Lys	Gly	Lys	Pro	Lys	Arg	Gly	Asp	Thr	Tyr	Glu	Leu	Gln	Val	Arg	Gly
145					150					155				160	
Phe	Ser	Ala	Glu	Gln	Ile	Ala	Arg	Trp	Ile	Ala	Asp	Arg	Thr	Asp	Val
			165					170						175	
Asn	Ile	Arg	Val	Ile	Arg	Pro	Pro	Asn	Tyr	Ala	Gly	Pro	Leu	Met	Leu
	180							185					190		
Gly	Leu	Leu	Leu	Ala	Val	Ile	Gly	Gly	Leu	Val	Tyr	Leu	Arg	Arg	Ser
	195						200					205			
Asn	Met	Glu	Phe	Leu	Phe	Asn	Lys	Thr	Gly	Trp	Ala	Phe	Ala	Ala	Leu
	210						215					220			
Cys	Phe	Val	Leu	Ala	Met	Thr	Ser	Gly	Gln	Met	Trp	Asn	His	Ile	Arg
225					230					235				240	
Gly	Pro	Pro	Tyr	Ala	His	Lys	Asn	Pro	His	Thr	Gly	His	Val	Asn	Tyr
			245						250					255	
Ile	His	Gly	Ser	Ser	Gln	Ala	Gln	Phe	Val	Ala	Glu	Thr	His	Ile	Val
			260					265					270		
Leu	Leu	Phe	Asn	Gly	Gly	Val	Thr	Leu	Gly	Met	Val	Leu	Leu	Cys	Glu

	275		280		285
Ala	Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys Ile Met Cys Val				
	290		295		300
Ala	Gly Ile Gly Leu Val Val Leu Phe Phe Ser Trp Met Leu Ser Ile				
305		310		315	320
Phe	Arg Ser Lys Tyr His Gly Tyr Pro Tyr Ser Phe Leu Met Ser				
	325		330		335

&lt;210&gt; 5409

&lt;211&gt; 2019

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5409

```

ttttgaagcc tcagtcataa atttaatacaa ttctaggttg aatgctaaga aaagttttaa
60
ttgtgcaaat gtggtacata acatttcaaa tataagtggga aggatcatca gtagtggtat
120
caaaatgcat aatacagaaa ctttttaaga aaggataaaa aattacactc aggaccata
180
actcttcttc attataagca tatgtagtga ttcattcatg caggttttta tatgtagata
240
ggattttttt ttccttttca agaattccat tgtagccatg agatgaaaaa tgtattatgg
300
taatgggtata gctttcttct attttgcttt tagtggttagg tttgctaaaa gcttatttaa
360
aattcccaac tgacataatg tgttttcaat aaggaggacg ctgccgtgtc caataccctt
420
ccccgtcat tgttcggtac catatctcct ggcttcttc tacatgggtc acttagttaa
480
gagggaggcc aaggaggattc cgatttcagg cagtgtgtgg cagggttact gtccagcaa
540
cctggctact cctcactgtg aacgtttctc atagggtgtca tatggcagga tgaaaaacat
600
atttgctcc cagtgaaga tggcacaggc ttttgcccag ccagggtggc aagagaacag
660
aactcttaac ccctgtctg acaggtttga gtccaagggg ttggatgctc caagcagagg
720
gccaaacct gatttatgaa gcatgctagg tcaacagcca gtcagaccac tcccacaaag
780
gctgccacaa aaactcccag ggaactgaga aaaatgttca ggggtggcaga actctgtggc
840
ccttctgcct ctttgagaa gtgttcaaag tagagaatat ccccagccc caccagtgc
900
catgggacca aggcctttcc atcctggtta tcataagttt taggggaatc agctgcctg
960
ggcctgccag ggcacacat ccacagaagc agaagagagg agtccctcat agaagccatg
1020
gaggagccgg agattgacac gcagggtgaa gtatctgcct cccacctcct accctccccg
1080
cagcctatag tctagcacag gcctggagtg cgggagcaac tgctacaatg ttcagttcaa
1140
tcagataaat tggttgggtg tctcttcaga ttccagaaca cttggaaatg gtaattctgc
1200

```

caaaagagggc tctgtcagag atgatctggg tgacagattg cagttaaaaa catcatctat  
 1260  
 tgaacctctg gaagttacac tgaactttcg gtcagagaaa ctgctccttc ggattaaagg  
 1320  
 ctcactcatt tttccagaa ataacttaat cgtctccttc tttctggac ttgtacttga  
 1380  
 caaattcaga acttttccat ttacttttac aacggaatta ctgagcccaa accaatagaa  
 1440  
 gaaatcaa atgcatcag ctttgaattc atatgcaaag cttaaatttt ctccattaac  
 1500  
 cacttcattt cctgggggga agaaattctt cactgectct tgaaaatcaa actgaaagag  
 1560  
 agaggacat tgcattgact gaagccggtg actttctcca atcactgagg agatgaccat  
 1620  
 gtccatccct tgctctatct gtcttcttat cttgggggtgc ctcgtgttta caagaaacgc  
 1680  
 gtacgtcctt tcttttgagg tgtctttttt ggtctgtaca ttaataaaga acaacattgg  
 1740  
 tttgtcaat atagtttccc tgtagtcttt ataatacag tagttggtca gttccacata  
 1800  
 cctcttgatg tagctgctga ggcggtagag ctgccgctcg aggcgcacga ggcgctcacc  
 1860  
 gaagacgttg aagccccccc gcgcgcgcgc cggctccccg ggcccgcca ccacgagctg  
 1920  
 gtcgcgcctc agctggaagg caccgggctg caggcgcagc agctgagcca gcggcagcag  
 1980  
 ggccagctcg cagtcgcagg tccacaggct gcgaagctt  
 2019

&lt;210&gt; 5410

&lt;211&gt; 198

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5410

Met	Leu	Phe	Phe	Ile	Asn	Val	Gln	Thr	Lys	Lys	Asp	Thr	Ser	Lys	Glu
1				5					10					15	
Arg	Thr	Tyr	Ala	Phe	Leu	Val	Asn	Thr	Arg	His	Pro	Lys	Ile	Arg	Arg
			20					25					30		
Gln	Ile	Glu	Gln	Gly	Met	Asp	Met	Val	Ile	Ser	Ser	Val	Ile	Gly	Glu
		35					40					45			
Ser	Tyr	Arg	Leu	Gln	Ser	Met	Gln	Cys	Ser	Ser	Leu	Phe	Gln	Phe	Asp
		50				55					60				
Phe	Gln	Glu	Ala	Val	Lys	Asn	Phe	Phe	Pro	Pro	Gly	Asn	Glu	Val	Val
65					70				75					80	
Asn	Gly	Glu	Asn	Leu	Ser	Phe	Ala	Tyr	Glu	Phe	Lys	Ala	Asp	Ala	Leu
			85					90					95		
Phe	Asp	Phe	Phe	Tyr	Trp	Phe	Gly	Leu	Ser	Asn	Ser	Val	Val	Lys	Val
			100				105					110			
Asn	Gly	Lys	Val	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Pro	Glu	Lys	Lys	Glu
		115				120					125				
Thr	Ile	Lys	Leu	Phe	Leu	Glu	Lys	Met	Ser	Glu	Pro	Leu	Ile	Arg	Arg
130					135					140					
Ser	Ser	Phe	Ser	Asp	Arg	Lys	Phe	Ser	Val	Thr	Ser	Arg	Gly	Ser	Ile

145		150		155		160									
Asp	Asp	Val	Phe	Asn	Cys	Asn	Leu	Ser	Pro	Arg	Ser	Ser	Leu	Thr	Glu
		165				170							175		
Pro	Leu	Leu	Ala	Glu	Leu	Pro	Phe	Pro	Ser	Val	Leu	Glu	Ser	Glu	Glu
		180				185							190		
Thr	Pro	Asn	Gln	Phe	Ile										
		195													

&lt;210&gt; 5411

&lt;211&gt; 2802

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5411

```

nccaggtaaa tctgaggaac ttccccaagc ctttatttgc acccggtaaa tccaataata
60
ccaattttga ttttaaatgg gaggggggtc cttgcaggcc ccacatgaga ggggtggcct
120
tgaagaattc cttgggttac ccacaggctt accagtttgg aaactcgcca ccccgagcag
180
aaggcagccc ggtattttgt gttatacaaa ccgcccccta aagacaacat tcccgccta
240
gtggaggagt acctggaacg cgccaccttc gtagccaatg acctcgactg gctcctggcc
300
ttgcctcacg ataaattctg gtgccagggtg atctttgacg agactctaca gaagtgcctg
360
gactcctacc tgcgctatgt cccccgaaa ttcgacgagg ggggtggcctc agccccctgag
420
gttggtgaca tgcagaagcg cctccatcga agtggttttc tcaccttctc cgcgatgtcc
480
actcacaagg aatccaaaga tcacttcatt tccccttctg cgtttgaga aatcctctac
540
aataacttcc tctttgacat tccaaagatc ctggacctct gcgtgctctt tggaaaaggc
600
aactcaccac tgctccagaa gatgatagga aacatcttta cacagcagcc aagttactac
660
agtgacctgg atgaaccctt gctaccatc cttcagggtc tcagcaatat cctccagcac
720
tgtggtttgc aaggggacgg ggccaatacc acacccaga agcttgagga gaggggcccga
780
ttgaccccca gtgacatgcc tctcctggaa ttaaaggaca ttgttctcta cctttgtgat
840
acctgcacca cactttgggc cttctggat atcttccctt tggttgcca gaccttccag
900
aagcacgact tttgttacag actagcttcc ttctacgaag cagcaattcc cgaaatggag
960
tctgcaatta agaagaggag gcttgaagat agcaagcttc ttggtgacct gtggcagagg
1020
ctctcccatt ccaggaagaa gctaattggag attttccaca tcactctgaa ccagatctgc
1080
ctccttccca tcctagaaag cagctgtgac aacattcagg gcttcatcga agagttcctt
1140
cagatcttca gctccttgct gcaggagaag aggttcctcc gggactatga tgcactcttc
1200

```

cccgtggccg aagacatcag cttgctgcag caggcctcat cagtcttggg cgagacgcgg  
1260  
actgcctaca tcctccaggc agtcgagagt gcatgggaag ggggtggacag acggaaagcc  
1320  
acagatgcta aagacccatc ggtgattgag gaggcctaag gggagcctaa cggggtcacg  
1380  
gtgacagcag aggcagtcag tcaagcatca tcacatccgg agaactcgga ggaagaggag  
1440  
tgcattgggag cagccgcggc tgtgggcccct gccatgtgtg ggggtggaact ggactctctc  
1500  
atctcccaag tgaaggacct gctgccagac cttggtgagg gcttcatcct ggctgcctg  
1560  
gagtactacc actacgaccc agagcagggt atcaacaata tcctggagga ggggtggcc  
1620  
cccaccccca gccagctgga ccgcaaccta gacagagaaa tgaaaccaga ccctacaccc  
1680  
ctgctgacgt ctgccacaa cgtcttccag aatgacgagt ttgatgtgtt cagcagggac  
1740  
tcagtagacc tgagccgggt gcacaagggc aagagcacca ggaaggagga aaacacgcgg  
1800  
agtttctgta acgacaagcg tgcagtggcg gcacagcggc agcgctacga gcagtacagc  
1860  
gtgggtgggtg aggaggtgcc actgcagcca ggcgagagcc tgccctacca cagtgtctac  
1920  
taccaggatg agtacgatga cacatacgat ggcaaccagg tgggcgcca tgatgcagac  
1980  
tctatgacga gctcatcagc cgcaggccat tcaccatccc aggtgctgag aaccaagtg  
2040  
cctagagaag ggcaggagga ggatgacgac gatgaggaag acgatgctga cgaggaggct  
2100  
cccaagcccg accattttgt tcaggacct gcagtgtga gagagaaggc agaagccagg  
2160  
cgcattggcct ttctcgccaa gaaagggtac cggcatgaca gctcaacagc agtggccggc  
2220  
agcccccgag gccatgggca gagccgcgag acaaccagg aacgcaggaa gaaggagcc  
2280  
aacaaggcga caagagccaa ccacaaccgg agaaccatgg ccgaccgcaa gaggagcaaa  
2340  
ggcatgatcc catcctgaga cctggtgcag ggccagtggg gaggcagcgg caccagactc  
2400  
accaggccgc gctcccatcg cctggggcct cctcactagg ggccccaagt tcaactcaac  
2460  
ccctcaacag cctcagcttt gcagcccctg agaaggccgc ctctcatcta ccagccagcc  
2520  
atgagcgcct tcctgcagaa cacacagtgc cttatgccac agccgaagaa tccgtggggc  
2580  
cggcaagcag gcaccttccc ccagctgcgc tagcgggaaa gagatgggga tggagtccca  
2640  
aggcaagcgc cccaaacctc gggccacaag acaccacttc ccctttaccc tggacagcag  
2700  
gaaacctgta tattcaaaaa cacaaaaagt cctgctaata aaatttttga ccctttcaaa  
2760  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
2802

<210> 5412  
 <211> 642  
 <212> PRT  
 <213> Homo sapiens

<400> 5412

Met	Gln	Lys	Arg	Leu	His	Arg	Ser	Val	Phe	Leu	Thr	Phe	Leu	Arg	Met
1				5					10					15	
Ser	Thr	His	Lys	Glu	Ser	Lys	Asp	His	Phe	Ile	Ser	Pro	Ser	Ala	Phe
			20					25					30		
Gly	Glu	Ile	Leu	Tyr	Asn	Asn	Phe	Leu	Phe	Asp	Ile	Pro	Lys	Ile	Leu
		35					40					45			
Asp	Leu	Cys	Val	Leu	Phe	Gly	Lys	Gly	Asn	Ser	Pro	Leu	Leu	Gln	Lys
	50					55					60				
Met	Ile	Gly	Asn	Ile	Phe	Thr	Gln	Gln	Pro	Ser	Tyr	Tyr	Ser	Asp	Leu
65					70					75				80	
Asp	Glu	Thr	Leu	Pro	Thr	Ile	Leu	Gln	Val	Phe	Ser	Asn	Ile	Leu	Gln
			85						90					95	
His	Cys	Gly	Leu	Gln	Gly	Asp	Gly	Ala	Asn	Thr	Thr	Pro	Gln	Lys	Leu
			100					105					110		
Glu	Glu	Arg	Gly	Arg	Leu	Thr	Pro	Ser	Asp	Met	Pro	Leu	Leu	Glu	Leu
		115					120					125			
Lys	Asp	Ile	Val	Leu	Tyr	Leu	Cys	Asp	Thr	Cys	Thr	Thr	Leu	Trp	Ala
	130					135					140				
Phe	Leu	Asp	Ile	Phe	Pro	Leu	Ala	Cys	Gln	Thr	Phe	Gln	Lys	His	Asp
145					150					155				160	
Phe	Cys	Tyr	Arg	Leu	Ala	Ser	Phe	Tyr	Glu	Ala	Ala	Ile	Pro	Glu	Met
			165						170					175	
Glu	Ser	Ala	Ile	Lys	Lys	Arg	Arg	Leu	Glu	Asp	Ser	Lys	Leu	Leu	Gly
			180					185					190		
Asp	Leu	Trp	Gln	Arg	Leu	Ser	His	Ser	Arg	Lys	Lys	Leu	Met	Glu	Ile
	195						200					205			
Phe	His	Ile	Ile	Leu	Asn	Gln	Ile	Cys	Leu	Leu	Pro	Ile	Leu	Glu	Ser
210						215					220				
Ser	Cys	Asp	Asn	Ile	Gln	Gly	Phe	Ile	Glu	Glu	Phe	Leu	Gln	Ile	Phe
225				230						235				240	
Ser	Ser	Leu	Leu	Gln	Glu	Lys	Arg	Phe	Leu	Arg	Asp	Tyr	Asp	Ala	Leu
			245						250					255	
Phe	Pro	Val	Ala	Glu	Asp	Ile	Ser	Leu	Leu	Gln	Gln	Ala	Ser	Ser	Val
		260						265					270		
Leu	Asp	Glu	Thr	Arg	Thr	Ala	Tyr	Ile	Leu	Gln	Ala	Val	Glu	Ser	Ala
	275						280					285			
Trp	Glu	Gly	Val	Asp	Arg	Arg	Lys	Ala	Thr	Asp	Ala	Lys	Asp	Pro	Ser
290						295					300				
Val	Ile	Glu	Glu	Pro	Asn	Gly	Glu	Pro	Asn	Gly	Val	Thr	Val	Thr	Ala
305				310						315				320	
Glu	Ala	Val	Ser	Gln	Ala	Ser	Ser	His	Pro	Glu	Asn	Ser	Glu	Glu	Glu
			325						330					335	
Glu	Cys	Met	Gly	Ala	Ala	Ala	Ala	Val	Gly	Pro	Ala	Met	Cys	Gly	Val
		340						345				350			
Glu	Leu	Asp	Ser	Leu	Ile	Ser	Gln	Val	Lys	Asp	Leu	Leu	Pro	Asp	Leu
	355						360					365			
Gly	Glu	Gly	Phe	Ile	Leu	Ala	Cys	Leu	Glu	Tyr	Tyr	His	Tyr	Asp	Pro

370		375		380
Glu Gln Val Ile Asn Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu				
385		390		395
Ser Gln Leu Asp Arg Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr				400
	405		410	415
Pro Leu Leu Thr Ser Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp				
	420		425	430
Val Phe Ser Arg Asp Ser Val Asp Leu Ser Arg Val His Lys Gly Lys				
	435	440		445
Ser Thr Arg Lys Glu Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg				
	450	455		460
Ala Val Ala Ala Gln Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val				
465		470		475
Glu Glu Val Pro Leu Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val				480
	485		490	495
Tyr Tyr Glu Asp Glu Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly				
	500		505	510
Ala Asn Asp Ala Asp Ser Met Thr Ser Ser Ser Ala Ala Gly His Ser				
	515	520		525
Pro Ser Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu				
	530	535		540
Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro				
545		550		555
Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala				
	565		570	575
Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser				
	580		585	590
Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr				
	595	600		605
Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn				
610		615		620
His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile				
625		630		635
Pro Ser				640

&lt;210&gt; 5413

&lt;211&gt; 1677

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5413

```

agagatgggt gtgtaatgaa aattacaagg tcgttgaaca aggttagtag tgtcttgcc
60
ttttattctg tcatctcaaa cttcataaac agtcatacgt tctttgaaac gtagatttaa
120
tgtgtgcagt catttataaa tcaatgacat ttctcttttt tgtcataaaa ctgtatactg
180
aagaaattaa cgaatgcaca gtttctaaag ctgttgcat tgtctgtgga atcataggtt
240
cccactaaga agaatttcag cattctggcc agaaatttga atacaattca agttgaagaa
300
atgtctgcct gtaacattag catccagggt ccagcatat ataataagga gcctaaaaat
360

```



ataataaatc ctcatgaaaa agttcaaag agtcaattt gtgcaaattc tcctataaag  
420  
gcacaacagg atcaattaca agtaaaaaac aatataaaag caagtcttca caatgtcaaa  
480  
agttccttac ctctttttta tactaagtcc tctacttctg tggggcagtt gcagtctcct  
540  
accttgaatt cacctatcta tatgcaaaag caaggaaaa atgaacatct tgcattttaat  
600  
accaaatcta aggettcaac agttggttca gaattggtac ttgtttctac caccgttcca  
660  
actgttcac atgtttctga ttggaaatg agctctactc tggactgttt acctgtgttg  
720  
gctgattggg aggatgtggt ttactgccg gcactcagc ctgaggaaaa cgtagactgt  
780  
acagttccca ttagtgactc agacttagag atttcattta attctggaga aagattaatg  
840  
gttttgaaag aattggaaat gtcaagtcac gaaaactttg gagacataga ggaaactcct  
900  
caaaaatctg agacttctaa gtctattgtg tacaagagtc ctcacactac tatttataat  
960  
gtaaaagaag ccaagatcc aggttcagat atttctgct ttaagttacc tgaacacaaa  
1020  
tcaagtacct tcaacagagt taatgccaat atgtctcacc ctttagtttt ggggaaacat  
1080  
cctcttcttt caggtgtgac caaaaggaat ccatgcagtc cccaagcttt cccaccagca  
1140  
aaaaaacaac ctttactat tcatgaagaa aagcctacat catctgattg ctccccagta  
1200  
agaagttctt cctggaggcg tctcccatct atattaactt ctacagttaa cctacaagag  
1260  
ccatggaaga gtgggaaaat gacacctcca ttatgcaagt gtggtcggag atctaagaga  
1320  
cttggtgttt ctaataatgg accgaacct ggaaaagtct tctattgttg ccctatcggg  
1380  
aaataccaag aaaacagaaa atgttggtgt tatttcaa at ggaacaaac acttcaaaag  
1440  
gaaagagcca acagcatggt tccatctcat tccacagggg gactcacttt tagttctcca  
1500  
gaaacaagcc atatttgtga cagaaattta agtatttcca ccaaaaattc tttgagactc  
1560  
aggccttcaa tgaggaattg ataacctttc atgtatgaat cctaattgtt ccttgaattt  
1620  
caaacatga gtattctgat aacatcttac actattttat tttatttta tatatta  
1677

&lt;210&gt; 5414

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5414

Met	Ser	Ala	Cys	Asn	Ile	Ser	Ile	Gln	Gly	Pro	Ser	Ile	Tyr	Asn	Lys
1				5				10					15		
Glu	Pro	Lys	Asn	Ile	Ile	Asn	Pro	His	Glu	Lys	Val	Gln	Met	Lys	Ser

20 25 30  
 Ile Cys Ala Asn Ser Pro Ile Lys Ala Gln Gln Asp Gln Leu Gln Val  
 35 40 45  
 Lys Asn Asn Ile Lys Ala Ser Leu His Asn Val Lys Ser Ser Leu Pro  
 50 55 60  
 Leu Phe Asn Thr Lys Ser Ser Thr Ser Val Gly Gln Leu Gln Ser Pro  
 65 70 75 80  
 Thr Leu Asn Ser Pro Ile Tyr Met Gln Lys Gln Gly Lys Asn Glu His  
 85 90 95  
 Leu Ala Phe Asn Thr Lys Ser Lys Ala Ser Thr Val Gly Ser Glu Leu  
 100 105 110  
 Val Leu Val Ser Thr Thr Val Pro Thr Val His His Val Ser Asp Leu  
 115 120 125  
 Glu Met Ser Ser Thr Leu Asp Cys Leu Pro Val Leu Ala Asp Trp Glu  
 130 135 140  
 Asp Val Val Leu Leu Pro Ala Ser Gln Pro Glu Asn Val Asp Cys  
 145 150 155 160  
 Thr Val Pro Ile Ser Asp Ser Asp Leu Glu Ile Ser Phe Asn Ser Gly  
 165 170 175  
 Glu Arg Leu Met Val Leu Lys Glu Leu Glu Met Ser Ser His Glu Asn  
 180 185 190  
 Phe Gly Asp Ile Glu Glu Thr Pro Gln Lys Ser Glu Thr Ser Lys Ser  
 195 200 205  
 Ile Val Tyr Lys Ser Pro His Thr Thr Ile Tyr Asn Val Lys Glu Ala  
 210 215 220  
 Lys Asp Pro Gly Ser Asp Ile Ser Ala Phe Lys Leu Pro Glu His Lys  
 225 230 235 240  
 Ser Ser Thr Phe Asn Arg Val Asn Ala Asn Met Ser His Pro Leu Val  
 245 250 255  
 Leu Gly Lys His Pro Leu Leu Ser Gly Gly Thr Lys Arg Asn Pro Cys  
 260 265 270  
 Ser Pro Gln Ala Phe Pro Pro Ala Lys Lys Gln Pro Phe Thr Ile His  
 275 280 285  
 Glu Glu Lys Pro Thr Ser Ser Asp Cys Ser Pro Val Arg Ser Ser Ser  
 290 295 300  
 Trp Arg Arg Leu Pro Ser Ile Leu Thr Ser Thr Val Asn Leu Gln Glu  
 305 310 315 320  
 Pro Trp Lys Ser Gly Lys Met Thr Pro Pro Leu Cys Lys Cys Gly Arg  
 325 330 335  
 Arg Ser Lys Arg Leu Val Val Ser Asn Asn Gly Pro Asn His Gly Lys  
 340 345 350  
 Val Phe Tyr Cys Cys Pro Ile Gly Lys Tyr Gln Glu Asn Arg Lys Cys  
 355 360 365  
 Cys Gly Tyr Phe Lys Trp Glu Gln Thr Leu Gln Lys Glu Arg Ala Asn  
 370 375 380  
 Ser Met Val Pro Ser His Ser Thr Gly Gly Leu Thr Phe Ser Ser Pro  
 385 390 395 400  
 Glu Thr Ser His Ile Cys Asp Arg Asn Leu Ser Ile Ser Thr Lys Asn  
 405 410 415  
 Ser Leu Arg Leu Arg Pro Ser Met Arg Asn  
 420 425

&lt;210&gt; 5415

&lt;211&gt; 1493

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5415

ntcagcctta cagagactgg aaaagaagcc caaaccaagg cccagagag gtccccag  
60  
cccccttggg tccctgagcc tcagctggag gtgggggggtg cctgcagtgc gctggctcag  
120  
tctccttctg aaaagctgga tccagcttgt ttgaagccct tgagctgac ttagatccg  
180  
cgcaggagac caacgcctgc catgctgttc cggctctcag agcactcctc accagaggag  
240  
gaagcctccc cccaccagag agcctcagga gaggggcacc atctcaagtc gaagagaccc  
300  
aaccctgtg cctacacacc accttcgctg aaagctgtgc agcgcattgc tgagtctcac  
360  
ctgcagtcta tcagcaattt gaatgagaac caggcctcag aggaggagga tgagctggg  
420  
gagcttcggg agctgggtta tccaagagag gaagatgagg aggaagagga ggatgatgaa  
480  
gaagaggaag aagaagagga cagccagget gaagtcctga aggtcatcag gcagtctgct  
540  
gggcaaaaga caacctgtgg ccagggtctg gaagggccct gggagcgccc acccctctg  
600  
gatgagtccg agagagatgg aggtctctgag gaccaagtgg aagaccagc actaagtga  
660  
cctggggagg aacctcagcg cccctcccc tctgagcctg gcacatagge accagcctg  
720  
catctcccag gaggaagtgg aggggacatc gctgttcccc agaaacccac tctatcctca  
780  
ccctgttttg tgctcttccc ctgcctgct agggctgogg cttctgactt ctagaagact  
840  
aaggctggtc tgtgtttgct tgtttgccca cctttggtg ataccagag aacctgggca  
900  
cttgctgct gatgccacc cctgccagtc attcctccat tcaccagcg ggaggtggga  
960  
tgtgagacag cccacattgg aaaatccaga aaaccgggaa cagggatattg ccttcacaa  
1020  
ttctactccc cagatcctct cccctggaca caggagaccc acagggcagg accctaagat  
1080  
ctggggaaag gaggtcctga gaaccttgag gtacccttag atccttttct accactttc  
1140  
ctatggagga tccaagtca ccacttctct caccggttc taccagggtc caggactaag  
1200  
gcgtttttct ccatagcctc aacatttttg gaatcttccc ttaatcacc ttgtcctcc  
1260  
tggtgacctg gaagatggac tggcagagac ctctttgttg cgttttgtgc ttgatgcca  
1320  
ggaatgccgc ctagtttatg tccccggtgg ggcacacagc gggggcgcc aggttttcc  
1380  
tgtccccag ctgctctgcc cctttccct tcttcctga ctccaggcct gaacccctcc  
1440  
cgtgctgtaa taaatctttg taaataaaaa aaaaaaaaaa aaaaaaaaaa aaa  
1493

<210> 5416  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 5416  
 Xaa Ser Leu Thr Glu Thr Gly Lys Glu Ala Gln Thr Lys Ala Pro Glu  
 1 5 10 15  
 Arg Ser Pro Arg Pro Leu Trp Phe Pro Glu Pro Gln Leu Glu Val Gly  
 20 25 30  
 Gly Ala Cys Ser Ala Leu Ala Gln Ser Pro Ser Glu Lys Leu Asp Pro  
 35 40 45  
 Ala Cys Leu Lys Pro Leu Ser  
 50 55

<210> 5417  
 <211> 2087  
 <212> DNA  
 <213> Homo sapiens

<400> 5417  
 tccacgcacc tgccatgtgc caggcactaa tccagatgcc ggggatatat ttgtaaacia  
 60  
 aacctaccac cctcatggat aaagaagggt gagagtata aaggagactg ttctagataa  
 120  
 catggtcaga gaaggtctct ctgaagaggt gacttttttag cagagacttg aaggagatga  
 180  
 gagaataagc catgccagca tctgagatga agagcattcc agacagaaag aacagcaagc  
 240  
 gcagaggccc tgaggtggcc catatctggc gtgttcaagg agtagccata ggaggccagg  
 300  
 atggctgcaa ttgatgagga aggagggaga gagataggag atgaagtcaa tatattggtg  
 360  
 aaggaacaga cacagttagg ggtcaagact ctcagtaggt tactcaagga accagagaaa  
 420  
 gaacgggact cagactcaga tttctccctt cttcagcaga ctgagggatg ccagcgaaga  
 480  
 gacaagcact tccgtcatgc agaaaacccc catcatcctc tcaaaacctc cagcagagcg  
 540  
 gcccctctgg agaagcccat cggtctcatg aagccacggg aggaggggaa ggggcctgtg  
 600  
 gccgtgacag gtgcctctac ccctgagggc accgcccac caccctctgc agcccctgcg  
 660  
 ccacccaagg gggagaagga ggggcagaga cccacacagc ctgtgtacca gatccagaac  
 720  
 cggggcatgg gcaactgccg accagcagcc atggaccctg tcgtgggtca ggccaaacta  
 780  
 ctgccccag agcgcataaa gcacagcatc aagttggtgg atgaccagat gaattggtgt  
 840  
 gacagtcca tcagtagcct gttggatcag actgatgtgt tgggtggtgg tgcctgggc  
 900  
 ctccagggga caggcaagtc catggatcatg tcattgttgt cagccaacac tccagaggag  
 960

gaccagagga cttatgtttt ccgggcccag agcgctgaaa tgaaggaacg agggggcaac  
 1020  
 cagaccagtg gcacgactt ctttattacc caagaacgga ttgttttctt ggacacacag  
 1080  
 cccatcctga gcccttctat cctagaccat ctcatcaata atgaccgcaa actgcctcca  
 1140  
 gagtacaacc ttccccacac ttacgttgaa atgcagtcac tccagattgc tgccttctt  
 1200  
 ttcacgggtc gccatgtggt gattgtgtgc caggactggt tcacagacct cagtctctac  
 1260  
 aggtgtgtgg acctgggggt caagtgcagg agcaacagcc actcacccca aaccccaag  
 1320  
 ttctgcaga cagcagagat ggtgaagccc tccaccccat ccccagcca cgagtccagc  
 1380  
 agctcatcgg gctccgatga aggcaccgag tactaccccc acctagtctt cttgcagaac  
 1440  
 aaagctcgcc gagaggactt ctgtcctcgg aagctgcggc agatgcacct gatgattgac  
 1500  
 cagctcatgg ccactccca cctgcgttac aagggaactc tgtccatgtt acaatgcaat  
 1560  
 gtcttcccg ggcttccacc tgacttctg gactctgagg tcaacttatt cctggtacct  
 1620  
 ttcattgaca gtgaagcaga gagtgaagac ccaccaagag caggacctgg ttccagccca  
 1680  
 ctcttctccc tgctgcctgg gtatcgtggc caccacagtt tccagtcctt ggtgagcaag  
 1740  
 ctccggagcc aagtgatgtc catggcccgg ccacagctgt cacacacgat cctcaccgag  
 1800  
 aagaactggt tccactacgc tgcccggatc tgggatgggg tgagaaagtc ctctgctctg  
 1860  
 gcagagtaca gccgcctgct ggctgagggc caaggagagg aatgtcatgc aggggacctc  
 1920  
 ctgggtccgc agtgtactgc gaggagcac agatgtccat ccccgctgg ggtggagagc  
 1980  
 ggcagcaggc ctgatggatg agggatcgtg gcttcccgcc ccagagacat gaggtgtcca  
 2040  
 gggccaggcc cccacccctc agttggggct gttccggggg tgactgt  
 2087

&lt;210&gt; 5418

&lt;211&gt; 528

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5418

Met	Ala	Ile	Asp	Glu	Glu	Gly	Gly	Arg	Glu	Ile	Gly	Asp	Glu	Val
1			5					10					15	
Asn	Ile	Leu	Val	Lys	Glu	Gln	Thr	Gln	Leu	Gly	Val	Lys	Thr	Leu
			20					25					30	
Arg	Leu	Leu	Lys	Glu	Pro	Glu	Lys	Glu	Arg	Asp	Ser	Asp	Ser	Phe
			35					40					45	
Ser	Pro	Leu	Gln	Gln	Thr	Glu	Gly	Cys	Gln	Arg	Arg	Asp	Lys	Phe
			50					55					60	
Arg	His	Ala	Glu	Asn	Pro	His	His	Pro	Leu	Lys	Thr	Ser	Ser	Arg
														Ala

4602

	500		505		510										
Gly	Val	Arg	Lys	Ser	Ser	Ala	Leu	Ala	Glu	Tyr	Ser	Arg	Leu	Leu	Ala
	515						520						525		

<210> 5419  
 <211> 989  
 <212> DNA  
 <213> Homo sapiens

<400> 5419  
 ttttcgtcca ggagtcggag gagcaagtcc aggtcccgtt cccgaaggcg ccaccagcgg  
 60  
 aagtacaggc gctactcgcg gtcatactcg cggagccggt cgcgatcccg cagccgccgt  
 120  
 taccgagaga ggcgtacgg gttcaccagg agatactacc ggtctccttc gcggtaccgg  
 180  
 tcccgggtccc gtagcaggtc gcgctctcgg ggaaggctcg actgcggaag ggcgtacgcg  
 240  
 atcgcgcggg gacagcgcta ctacggcttt ggtcgcacag tgtacccgga ggagcacagc  
 300  
 agatggaggg acagatccag gacgaggctc cggagcagaa ccccttttcg cttaagtga  
 360  
 aaagatcgaa tggagctggt agaaatagca aaaaccaatg cagcgaaagc tctaggaaca  
 420  
 accaaccattg acttgccagc tagtctcaga actgttcctt cagccaaaga aacaagccgt  
 480  
 ggaatagggtg tatcaagtaa tggtgcaaag cctgaaaaat catgaatgtg gtctgcagac  
 540  
 attgatgaag aaaatctggt gctgtcggaa aaggtaacag aagatggaac tcgaaatccc  
 600  
 aatgaaaaac ctaccagca aagaagcata gcttttagct ctaataattc tgtagcaaag  
 660  
 ccaatacaaa aatcagctaa agctgccaca gaagaggcat cttcaagatc accaaaaata  
 720  
 gatcagaaaa aaagtcata tggactgtgg atacctatct aaaagaagaa aactgatggc  
 780  
 taagtattgca tgaaaactgc actttattgc aagttagtgt ttctagcatt atcccatccc  
 840  
 tttgagccat tcaggggtac ttgtgcattt aaaaaccaac acaaaaagat gtaaatactt  
 900  
 aacactcaaa tattaacatt ttaggtttct cttgcagata tgagagatag cacagatgga  
 960  
 ccaaagggtta tgcacagggt ggagtcttt  
 989

<210> 5420  
 <211> 174  
 <212> PRT  
 <213> Homo sapiens

<400> 5420  
 Phe Ser Ser Arg Ser Arg Ser Lys Ser Arg Ser Arg Ser Arg Arg  
 1 5 10 15  
 Arg His Gln Arg Lys Tyr Arg Arg Tyr Ser Arg Ser Tyr Ser Arg Ser

```

<400> 5421
nccagctgcc gctgtcgtct ttgcttcagc cgcagtcgcc actggctgcc tgagggtgctc
60
ttacagcctg ttccaagtgt ggcttaatcc gtctccacca ccagatcttt ctccgtggat
120
tctctgcta agaccgctgc catgccagtg acggtaacct gcaccaccat cacaaccacc
180
acgacgtcat cttcgggcct ggggtccccc atgatcgtgg ggtccctctg ggccctgaca
240
cagccccctg gtctccttcg cctgctgcag ctggtgtcta cctgcgtggc cttctcgtg
300
gtggctagcg tgggcgcctg gacggggctc atgggcaact ggtccatgtt cacctggtgc
360
ttctgcttct ccgtgacct gatcatactc atcgtggagc tgtgcgggct ccaggccccg
420
ttccccctgt cttggcgcaa cttccccatc accttcgct gctatgcggc cctcttctgc
480
ctctcggcct ccatcatcta ccccaccacc tatgtccagt tctgtccca cggcgttcg
540
cgggaccacg ccatcgccgc caccttcttc tctgcatcg cgtgtgtggc ttacgccacc
600
gaagtggcct ggaccgcggc ccggcccggc gagatcactg gctatatggc caccgtaacc
660
gggctgctga aggtgctgga gaccttcgtt gcctgcatca tcttcgcgtt catcagcgac
720
cccaacctgt accagacca gccggccctg gagtggtgcg tggcggtgta cgccatctgc
780
ttcatcctag cggccatcgc catcctgctg aacctggggg agtgcaccaa cgtgctaccc
840

```



atcccccttcc ccagcttctc gtcggggctg gccttgtgtc tgtcctcctc tatgccaccg  
 900  
 cccttgttct ctggccctc taccagttcg atgagaagta tggcggccag cctcggcgct  
 960  
 cgagagatgt aagctgcagc cgcagccatg cctactacgt gtgtgctgg gaccgccgac  
 1020  
 tggctgtggc catcctgacg gccatcaacc tactggcgta tgtggctgac ctggtgcact  
 1080  
 ctgcccacct ggtttttgc aaggtttaag actctcccaa gaggtcccg ttccctctcc  
 1140  
 aacctctttg ttcttgttc cagagtttc ttatggagt acttctttcc ccgcctttc  
 1200  
 gtctgttttc ctttctctgt cctccctccc ttcacgcgt  
 1239

&lt;210&gt; 5422

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5422

Met	Pro	Val	Thr	Val	Thr	Arg	Thr	Thr	Ile	Thr	Thr	Thr	Thr	Ser
1			5						10				15	
Ser	Ser	Gly	Leu	Gly	Ser	Pro	Met	Ile	Val	Gly	Ser	Pro	Arg	Ala
			20					25					30	Leu
Thr	Gln	Pro	Leu	Gly	Leu	Leu	Arg	Leu	Leu	Gln	Leu	Val	Ser	Thr
			35				40					45		Cys
Val	Ala	Phe	Ser	Leu	Val	Ala	Ser	Val	Gly	Ala	Trp	Thr	Gly	Ser
			50				55				60			Met
Gly	Asn	Trp	Ser	Met	Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Val	Thr
					70					75				80
Ile	Ile	Leu	Ile	Val	Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro
				85					90					95
Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu
			100					105					110	Phe
Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe
			115				120					125		Leu
Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe
			130				135				140			Ser
Cys	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Val	Ala	Trp	Thr	Arg
					150					155				160
Arg	Pro	Gly	Glu	Ile	Thr	Gly	Tyr	Met	Ala	Thr	Val	Pro	Gly	Leu
				165					170					175
Lys	Val	Leu	Glu	Thr	Phe	Val	Ala	Cys	Ile	Ile	Phe	Ala	Phe	Ile
				180				185					190	Ser
Asp	Pro	Asn	Leu	Tyr	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val
			195				200					205		Ala
Val	Tyr	Ala	Ile	Cys	Phe	Ile	Leu	Ala	Ala	Ile	Ala	Ile	Leu	Leu
			210				215				220			Asn
Leu	Gly	Glu	Cys	Thr	Asn	Val	Leu	Pro	Ile	Pro	Phe	Pro	Ser	Phe
					230					235				240
Ser	Gly	Leu	Ala	Leu	Cys	Leu	Ser	Ser	Ser	Met	Pro	Pro	Pro	Leu
				245					250					255
Ser	Gly	Pro	Ser	Thr	Ser	Ser	Met	Arg	Ser	Met	Ala	Ala	Ser	Leu
														Gly

Ala Arg Glu Met  
275

260

265

270

<210> 5423  
<211> 2427  
<212> DNA  
<213> Homo sapiens

<400> 5423  
nccgcggcgtt tgcagagcag gatgaatgtg atagaccacg tgcgggacat ggcgggcgcg  
60  
gggctgcact ccaacgtgcg gctcctcagc agcttggttac ttacaatgag taataacaac  
120  
cctgagttat tctccccacc tcagaagtac cagcttttgg tgtatcatgc agattctctc  
180  
tttcatgata aggaatatcg gaatgctgtg agtaagtata ccatggcctt acagcagaag  
240  
aaagcgctaa gtaaaacttc aaaagtgaga cttcaactg gaaattctgc atctactcca  
300  
caaagtcagt gtcttccatc tgaaattgaa gtgaaataca aaatggctga atgttataca  
360  
atgctaaaac aagataaaga tgccattgct atacttgatg ggatcccttc aagacaaaga  
420  
actcccaaaa taaacatgat gctggcaaac ctgtacaaga aggctgggtca ggagcgccct  
480  
tcagtcacca gctataagga ggtgctgagg cagtgcccat tagcccttga tgccattcta  
540  
ggcttgttgt ccctttctgt aaaaggggca gaggtggcat ccatgacaat gaatgtgatc  
600  
caaaccgtgc ctaacttga ctggctctct gtgtggatca aagcgtatgc ttttgtgcac  
660  
actggtgaca actcaagagc aatcagtacc atctgttcac tagagaaaaa atccttattg  
720  
cgagataacg tggacctatt gggaagcttg gcagatctgt acttcagagc tggagacaat  
780  
aaaaactctg tctcaagtt tgaacaggca cagatgttgg atccttatct gataaaagga  
840  
atggatgtat atggctacct actggcacga gaagggcggc tagaggatgt tgagaacctt  
900  
ggatgccgcc ttttcaatat ctctgatcag catgcagaac cgtgggtggt ttctggctgt  
960  
cacagcttct atagcaaacy ctactcccg gccctctatt taggagccaa ggccattcag  
1020  
ctgaacagta atagtgttca agctctgcta cttaagggag cagcacttag gaacatgggc  
1080  
agagtccaag aagcaataat ccactttcgg gaggccatac ggctcgcacc ttgtcgctta  
1140  
gattgttatg aaggctctat cgaatgttac ttagcctcca acagtattcg agaagcaatg  
1200  
gtaatggcta acaacgttta caaaactctg ggagcaaatg cacagaccct taccctttta  
1260  
gccaccgttt gtcttgaaga ccagtgaca caggagaaag ccaaacatt attagataaa  
1320

gccctgaccc aaagccaga ttacattaag gctgtggtga aaaaagcaga actacttagc  
 1380  
 agagaacaga aatatgaaga tggaattgct ttgctgagga acgcactggc taatcagagt  
 1440  
 gactgtgtcc tgcacggat cctaggagat ttccttgtag ctgtcaatga gtatcaggag  
 1500  
 gcaatggacc agtatagtat agcactaagt ttggaccca atgaccagaa gtctctagag  
 1560  
 gggatgcaga agatggagaa ggaggagagt cccacggatg ccaactcagga ggaggatgtg  
 1620  
 gacgacatgg aagggagtgg ggaagaaggg gacctggagg gcagcgacag tgaggcgcc  
 1680  
 cagtgggctg accaggagca gtggttcggc atgagtgagg gggcggcagc tccatggccg  
 1740  
 cagtggcctg ccctgctctg agcacttccg tggactgaag gaaccgtagg agcctgctct  
 1800  
 cagaaggaca atgattcagc atgtgattgc agcaggggtc tctgccccct cgctcccaat  
 1860  
 tcctagtctg gacttcattt ctaaaacaga gcctgaccaa ccttccatgt atctccatcc  
 1920  
 tcccctgctc cagccaggga ggactgaggg agtgccccga gaccacgca catgttgggg  
 1980  
 cttctgggcc aagagtactt tttatataac taatttctaa atccaaaagc tcaaggaata  
 2040  
 gacagtgttc tgtgacatgg attggtttga aggagttacc caccatccca gcacgataat  
 2100  
 gtcactctcc aagttggatg gcagcacgat ctggccctag ggagcttctt gttcccagaa  
 2160  
 gtcattgtcc tgggctatcc agatgtccct agtaaattctt gcttcttctt gcaatgttag  
 2220  
 taatgcctta agctgacagt tgctattttg cagaacagtt ttctctttg cttagctagt  
 2280  
 aacttgctc tgagcctggg ctgatctgag aaacaggtgt gacaagagca tgaaccagag  
 2340  
 gtgcacctgg ggcagtccc taataaaact ggtttgtaca gtcatgggtg tggggtgatc  
 2400  
 agaatggaag cccttttcaa aataaaa  
 2427

&lt;210&gt; 5424

&lt;211&gt; 570

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5424

Met	Ala	Ala	Ala	Gly	Leu	His	Ser	Asn	Val	Arg	Leu	Leu	Ser	Ser	Leu
1				5					10					15	
Leu	Leu	Thr	Met	Ser	Asn	Asn	Asn	Pro	Glu	Leu	Phe	Ser	Pro	Pro	Gln
				20				25					30		
Lys	Tyr	Gln	Leu	Leu	Val	Tyr	His	Ala	Asp	Ser	Leu	Phe	His	Asp	Lys
		35					40					45			
Glu	Tyr	Arg	Asn	Ala	Val	Ser	Lys	Tyr	Thr	Met	Ala	Leu	Gln	Gln	Lys
		50				55					60				
Lys	Ala	Leu	Ser	Lys	Thr	Ser	Lys	Val	Arg	Pro	Ser	Thr	Gly	Asn	Ser

65					70					75					80
Ala	Ser	Thr	Pro	Gln	Ser	Gln	Cys	Leu	Pro	Ser	Glu	Ile	Glu	Val	Lys
				85					90					95	
Tyr	Lys	Met	Ala	Glu	Cys	Tyr	Thr	Met	Leu	Lys	Gln	Asp	Lys	Asp	Ala
			100					105					110		
Ile	Ala	Ile	Leu	Asp	Gly	Ile	Pro	Ser	Arg	Gln	Arg	Thr	Pro	Lys	Ile
		115				120					125				
Asn	Met	Met	Leu	Ala	Asn	Leu	Tyr	Lys	Lys	Ala	Gly	Gln	Glu	Arg	Pro
	130				135						140				
Ser	Val	Thr	Ser	Tyr	Lys	Glu	Val	Leu	Arg	Gln	Cys	Pro	Leu	Ala	Leu
145				150					155					160	
Asp	Ala	Ile	Leu	Gly	Leu	Leu	Ser	Leu	Ser	Val	Lys	Gly	Ala	Glu	Val
			165				170						175		
Ala	Ser	Met	Thr	Met	Asn	Val	Ile	Gln	Thr	Val	Pro	Asn	Leu	Asp	Trp
		180					185					190			
Leu	Ser	Val	Trp	Ile	Lys	Ala	Tyr	Ala	Phe	Val	His	Thr	Gly	Asp	Asn
	195				200						205				
Ser	Arg	Ala	Ile	Ser	Thr	Ile	Cys	Ser	Leu	Glu	Lys	Lys	Ser	Leu	Leu
	210				215					220					
Arg	Asp	Asn	Val	Asp	Leu	Gly	Ser	Leu	Ala	Asp	Leu	Tyr	Phe	Arg	
225				230					235					240	
Ala	Gly	Asp	Asn	Lys	Asn	Ser	Val	Leu	Lys	Phe	Glu	Gln	Ala	Gln	Met
			245				250						255		
Leu	Asp	Pro	Tyr	Leu	Ile	Lys	Gly	Met	Asp	Val	Tyr	Gly	Tyr	Leu	Leu
	260						265					270			
Ala	Arg	Glu	Gly	Arg	Leu	Glu	Asp	Val	Glu	Asn	Leu	Gly	Cys	Arg	Leu
	275				280						285				
Phe	Asn	Ile	Ser	Asp	Gln	His	Ala	Glu	Pro	Trp	Val	Val	Ser	Gly	Cys
	290				295						300				
His	Ser	Phe	Tyr	Ser	Lys	Arg	Tyr	Ser	Arg	Ala	Leu	Tyr	Leu	Gly	Ala
305				310					315					320	
Lys	Ala	Ile	Gln	Leu	Asn	Ser	Asn	Ser	Val	Gln	Ala	Leu	Leu	Leu	Lys
			325				330						335		
Gly	Ala	Ala	Leu	Arg	Asn	Met	Gly	Arg	Val	Gln	Glu	Ala	Ile	Ile	His
	340						345					350			
Phe	Arg	Glu	Ala	Ile	Arg	Leu	Ala	Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Glu
	355				360						365				
Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala	Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met
	370				375						380				
Val	Met	Ala	Asn	Asn	Val	Tyr	Lys	Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr
385				390					395					400	
Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys	Leu	Glu	Asp	Pro	Val	Thr	Gln	Glu
			405				410						415		
Lys	Ala	Lys	Thr	Leu	Leu	Asp	Lys	Ala	Leu	Thr	Gln	Arg	Pro	Asp	Tyr
	420						425					430			
Ile	Lys	Ala	Val	Val	Lys	Lys	Ala	Glu	Leu	Leu	Ser	Arg	Glu	Gln	Lys
	435					440					445				
Tyr	Glu	Asp	Gly	Ile	Ala	Leu	Leu	Arg	Asn	Ala	Leu	Ala	Asn	Gln	Ser
	450				455						460				
Asp	Cys	Val	Leu	His	Arg	Ile	Leu	Gly	Asp	Phe	Leu	Val	Ala	Val	Asn
465				470					475					480	
Glu	Tyr	Gln	Glu	Ala	Met	Asp	Gln	Tyr	Ser	Ile	Ala	Leu	Ser	Leu	Asp
			485				490					495			
Pro	Asn	Asp	Gln	Lys	Ser	Leu	Glu	Gly	Met	Gln	Lys	Met	Glu	Lys	Glu

```
<210> 5425
<211> 639
<212> DNA
<213> Homo sapiens
```

```
<210> 5426
<211> 98
<212> PRT
<213> Homo sapiens
```

4609

4610

ccggcgggcg gcaaggctcc gggccagcat gggggcttcg tggtgactgt caagcaagag  
 60  
 cgcggcgagg gtccacgcgc gggcgagaag ggggtcccacg aggaggaggt gagagtcctt  
 120  
 gcgctgagct gggggaggcc ccgggctccc gcccagcct cgaagccccg cccagggtg  
 180  
 gatttgaatt gcttgtggct ccgcccacag cccattttcc tctggaagct gagacccgc  
 240  
 cccgtgccag ctgccacgcc cctgacaggt cctctgccac tctaagtcca ggccccgcc  
 300  
 accgcacaat gccagctctg ccactctaa ggtcccgccc acttccactc cttgggggag  
 360  
 gacccctccc cttggtctcg tgggcccgtt ctccagcaga aaaccacgcc caccaagcag  
 420  
 aggccacgcc cacaaccgaa gtcaacgcc accctgtact caaacctcgg cccatagttc  
 480  
 ctcagatccc ctcacccctg gccagggatc cctctaacc accgtgtccc gactgtgac  
 540  
 cgggcccctac ctccatcttt tccgggttct tctcccagc taggccccgc cccatcccc  
 600  
 gcccatacgc gt  
 612

&lt;210&gt; 5430

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5430

Pro	Ala	Gly	Gly	Lys	Ala	Pro	Gly	Gln	His	Gly	Gly	Phe	Val	Val	Thr
1				5					10					15	
Val	Lys	Gln	Glu	Arg	Gly	Glu	Gly	Pro	Arg	Ala	Gly	Glu	Lys	Gly	Ser
			20					25					30		
His	Glu	Glu	Glu	Val	Arg	Val	Pro	Ala	Leu	Ser	Trp	Gly	Arg	Pro	Arg
			35				40					45			
Ala	Pro	Ala	Pro	Ala	Ser	Lys	Pro	Arg	Pro	Arg	Leu	Asp	Leu	Asn	Cys
	50					55					60				
Leu	Trp	Leu	Arg	Pro	Gln	Pro	Ile	Phe	Leu	Trp	Lys	Leu	Arg	Pro	Arg
65					70				75					80	
Pro	Val	Pro	Ala	Ala	Thr	Pro	Leu	Thr	Gly	Pro	Leu	Pro	Leu		
				85					90						

&lt;210&gt; 5431

&lt;211&gt; 3005

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5431

nngcacgatg tcattccagca gctgccccca ccacattaca ggaccctgga gtacctgctg  
 60  
 aggcaacctgg ccgcgatggc gagacacagt gccaacacca gcatgcatgc ccgcaacctg  
 120  
 gccattgtct gggcacccaa cctgctacgg tccatggagc tggagtcagt ggggaatgggt  
 180

ggcgcggcgg cgttcgsgga agttcgggtg cagtcggtgg tggaggagt tctgtcacc  
240  
catgtggacg tctgttcag cgacaccttc acctccgccc gctcagacc tgcaggccg  
300  
tgctgtctcc ccaggcccaa gtcccttgcg ggcagctgcc cctccaccg cctgtgacg  
360  
ctggaggaag cccaggcacg caccagggc cggtgggga cgccacgga gccacaact  
420  
ccaaggccc cgccctacc tgcggaaagg aggaagggg agagagggga gaagcagcg  
480  
aagccagggg gcagcagctg gaagacgttc tttgactgg gccggggccc cagtgtccct  
540  
cgaaagaagc ccctgcctg gctggggggc acccgtgcc caccgcagcc ttcaggcagc  
600  
agaccgcaca cgtcacact gagatctgcc aagagcgagg agtctctgtc atcgaggcc  
660  
agcggggctg gctccagag gctgcacagg ctggggcgac cccactccag cagcgacgt  
720  
ttccctgtgg gccagcacc tgctggctcc tgcgagagcc tgcctcgtc ctctctcc  
780  
gagtcctct cctctgagtc ctctcttcc tctctgagt cctcagcagc tgggctggg  
840  
gcactctctg ggtctccctc acaccgtacc tcagcctggc tagatgatgg tgatgagctg  
900  
gacttcagcc caccgcgtg cctggaggga ctccggggg tggactttga tcccttaacc  
960  
ttccgtgca gcagccccc cccaggggat ccgcacctc ccgccagccc agcaccccc  
1020  
gcccctgct ctgccttccc acccagggg acccccccagg ccatctcgcc ccgggggccc  
1080  
accagcccc cctgcctgc tgcctagac atctcagagc cctgggtgt atcagtcca  
1140  
cccgtgtcc tagaactgt gggggctggg ggagcacctg cctcagccac cccaacacca  
1200  
gctctcagcc ccggccggag cctgcgcccc catctcatac cctgctgct gcgaggagcc  
1260  
gaggccccgc tgactgacgc ctgccagcag gagatgtgca gcaagctccg gggagcccag  
1320  
ggccactcg gtctgatat ggagtcacca ctgccacccc ctccctgtc tctctgcg  
1380  
cctgggggtg cccaccccc gcccccctaag aaccagcac gctcatggc cctggccctg  
1440  
gctgagcggg ctacgaggt gcccgagcaa cagagccagc aggagtgtg gggcacccc  
1500  
cctgttccc aatccccctt ccacgctcg ctgtctctg aggtgggcg ggagcccctg  
1560  
gggacctcag ggagtgggc acctcccaac tccctagcac acccgggtgc ctgggtccc  
1620  
ggacccccc cctacttacc aaggcaacaa agtgatggga gcctgtgag gagccagcg  
1680  
cccatggga cctcaaggag gggactccga ggccctgcc aggtcagtgc gcagctcag  
1740  
gcaggtggcg ggggcaggga tgcgccagag gcagcagccc agtcccatg ttctgtccc  
1800



tcacaggttc ctacccccgg cttcttctcc ccagcccccga gggagtgcct gccacccttc  
 1860  
 ctgggggtcc ccaagccagg cttgtacccc ctgggcccccc catccttcca gccaggttcc  
 1920  
 ccagcccccag tctggaggag ctctctgggc cccctgcac cactcgacag gggagagaac  
 1980  
 ctgtactatg agatcggggc aagtgagggg tccccctatt ctggccccac ccgctcctgg  
 2040  
 agtccttttc gtcctatgcc ccccgacagg ctcaatgcct cctacggcat gcttggccaa  
 2100  
 tcacccccac tccacaggtc ccccgacttc ctgctcagct acccgccagc cccctcctgc  
 2160  
 tttccccctg accaccttgg ctactcagcc cccagcacc ctgctcggcg ccctacaccg  
 2220  
 cctgagcccc tctacgtcaa cctagctcta gggcccaggg gtccctcacc tgctcttcc  
 2280  
 tctctctctt cccctcctgc ccacccccga agcggttcag atcccggtcc ccagtcctcc  
 2340  
 cgccttcccc agaaacaacg ggcacctggg ggaccccgta cccctcatag ggtgcccggg  
 2400  
 ccttggggcc ctctgagcc tctctgtctc tacagggcag ccccgccagc ctacggaagg  
 2460  
 gggggcgagc tccaccgagg gtcttgtac agaaatggag ggcaaagagg ggagggggct  
 2520  
 ggtccccccac ccccttacc cactcccagc tggctcctcc actctgaggg ccagaccgca  
 2580  
 agctactgct gagcaccagc tgggaggggc cgtccttctt tcccttcacc ctactggat  
 2640  
 cttggcccaa ccaaaccctt tgttttgtat tttcttgaac cccgaccact accccaggtt  
 2700  
 tctaactttg taacttgctt ctgatgtggg tccctaacct ataatctcag ctccctacc  
 2760  
 ctggactgaa ggggtctgcc atccccccac caccctccat cctggggggc ctgcacaaa  
 2820  
 tctgggggtg gaggggctag gctgacccca tctcctctc cctccaggag cccccagcat  
 2880  
 gtctgacct gtgcacgggg atggggggac aactcctacc cttctttccc cacatgcccc  
 2940  
 actaaaccat ctgacaacat taatgaataa aatggtgaaa atgtgaaaaa aaaaaaaaaa  
 3000  
 aaaaa  
 3005

&lt;210&gt; 5432

&lt;211&gt; 863

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5432

Xaa	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg	Thr	Leu
1				5				10						15	
Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser	Ala	Asn
				20				25					30		
Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro	Asn	Leu

4614

465		470		475		480
Ala Glu Arg	Ala Gln Gln Val	Ala Glu Gln Gln Ser	Gln Gln Glu Cys			
	485		490		495	
Gly Gly Thr	Pro Pro Ala Ser	Gln Ser Pro Phe	His Arg Ser Leu Ser			
	500		505		510	
Leu Glu Val	Gly Gly Glu Pro	Leu Gly Thr Ser	Gly Ser Gly Pro Pro			
	515		520		525	
Pro Asn Ser	Leu Ala His Pro	Gly Ala Trp Val	Pro Gly Pro Pro Pro			
	530		535		540	
Tyr Leu Pro	Arg Gln Gln Ser	Asp Gly Ser Leu	Leu Arg Ser Gln Arg			
545		550		555		560
Pro Met Gly	Thr Ser Arg Arg	Gly Leu Arg Gly	Pro Ala Gln Val Ser			
	565		570		575	
Ala Gln Leu	Arg Ala Gly Gly	Gly Gly Arg Asp	Ala Pro Glu Ala Ala			
	580		585		590	
Ala Gln Ser	Pro Cys Ser Val	Pro Ser Gln Val	Pro Thr Pro Gly Phe			
	595		600		605	
Phe Ser Pro	Ala Pro Arg Glu	Cys Leu Pro Pro	Phe Leu Gly Val Pro			
	610		615		620	
Lys Pro Gly	Leu Tyr Pro Leu	Gly Pro Pro Ser	Phe Gln Pro Ser Ser			
625		630		635		640
Pro Ala Pro	Val Trp Arg Ser	Ser Ser Leu Gly	Pro Pro Ala Pro Leu Asp			
	645		650		655	
Arg Gly Glu	Asn Leu Tyr Tyr	Glu Ile Gly Ala	Ser Glu Gly Ser Pro			
	660		665		670	
Tyr Ser Gly	Pro Thr Arg Ser	Trp Ser Pro Phe	Arg Ser Met Pro Pro			
	675		680		685	
Asp Arg Leu	Asn Ala Ser Tyr	Gly Met Leu Gly	Gln Ser Pro Pro Leu			
	690		695		700	
His Arg Ser	Pro Asp Phe Leu	Leu Ser Tyr Pro	Pro Ala Pro Ser Cys			
705		710		715		720
Phe Pro Pro	Asp His Leu Gly	Tyr Ser Ala Pro	Gln His Pro Ala Arg			
	725		730		735	
Arg Pro Thr	Pro Pro Glu Pro	Leu Tyr Val Asn	Leu Ala Leu Gly Pro			
	740		745		750	
Arg Gly Pro	Ser Pro Ala Ser	Ser Ser Ser Ser	Pro Pro Ala His			
	755		760		765	
Pro Arg Ser	Arg Ser Asp Pro	Gly Pro Pro Val	Pro Arg Leu Pro Gln			
	770		775		780	
Lys Gln Arg	Ala Pro Trp Gly	Pro Arg Thr Pro	His Arg Val Pro Gly			
785		790		795		800
Pro Trp Gly	Pro Pro Glu Pro	Leu Leu Leu Tyr	Arg Ala Ala Pro Pro			
	805		810		815	
Ala Tyr Gly	Arg Gly Gly Glu	Leu His Arg Gly	Ser Leu Tyr Arg Asn			
	820		825		830	
Gly Gly Gln	Arg Gly Glu Gly	Ala Gly Pro Pro	Pro Pro Tyr Pro Thr			
	835		840		845	
Pro Ser Trp	Ser Leu His Ser	Glu Gly Gln Thr	Arg Ser Tyr Cys			
	850		855		860	

&lt;210&gt; 5433

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5433

gatctaacca acctccacta ctgcacaccc ctgccagcct cctgggacac caccgaccac  
 60  
 cactttggca gtagtagtgt ggggaatagt gtgaacaaca tcccagctgc tatgacccac  
 120  
 ctgggtataa gaagctcttc tggctccag agttctcgga gtaacccttc catccaagcc  
 180  
 acgtcaata agactgtgct ttctcttcc ttaaataacc acccacagac atctgttccc  
 240  
 aacgcactcg ctcttcaccc ttcgctccgt ctgttttccc ttagcaaccc atctctttcc  
 300  
 accacaaacc tgagcggccc gtctcggcgt cggcagcctc ccgtcagccc tctcagctt  
 360  
 tctctggccc ctgaagcaca tcaag  
 385

&lt;210&gt; 5434

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5434

Asp	Leu	Thr	Asn	Leu	His	Tyr	Ser	Thr	Pro	Leu	Pro	Ala	Ser	Leu	Asp
1			5					10						15	
Thr	Thr	Asp	His	His	Phe	Gly	Ser	Met	Ser	Val	Gly	Asn	Ser	Val	Asn
		20					25					30			
Asn	Ile	Pro	Ala	Ala	Met	Thr	His	Leu	Gly	Ile	Arg	Ser	Ser	Ser	Gly
	35					40					45				
Leu	Gln	Ser	Ser	Arg	Ser	Asn	Pro	Ser	Ile	Gln	Ala	Thr	Leu	Asn	Lys
	50				55					60					
Thr	Val	Leu	Ser	Ser	Ser	Leu	Asn	Asn	His	Pro	Gln	Thr	Ser	Val	Pro
65				70					75					80	
Asn	Ala	Ser	Ala	Leu	His	Pro	Ser	Leu	Arg	Leu	Phe	Ser	Leu	Ser	Asn
			85					90					95		
Pro	Ser	Leu	Ser	Thr	Thr	Asn	Leu	Ser	Gly	Pro	Ser	Arg	Arg	Arg	Gln
		100					105					110			
Pro	Pro	Val	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Gly	Pro	Glu	Ala	His	Gln
		115					120					125			

&lt;210&gt; 5435

&lt;211&gt; 617

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5435

ctcacacctg taatcacagc actttgggag gctgaggtgt gagccactgc tcttggttg  
 60  
 aaacagataa ttctttatat tcaacctgtt gtcaaaattt ttagaaacat tttccagtt  
 120  
 ccttgataa gtatactttg tataacttct ggcaaaccat aattatgaac tcacattact  
 180  
 atagtactat aatactgcag aaagggatct tgcgtttcag aaatgtcact catccagttt  
 240

tcctccctt tctctaacc catctccctc ccaggctcat ggtttctgtt gcaatcctct  
 300  
 ttctccttac acaaggcaag aagttttctt accaatagat cagacctgtg aaggactgcc  
 360  
 cgacatgac tgatatgggtt gttcttcatt ttgggctgta gtattttaaa gtagagggtt  
 420  
 gctctgatgg tcccatcact gcttgccatt gtctttccct ttgctctagc tatcagggga  
 480  
 tggtgcttta agtttggtcc ccaggcttta ctgccaagag ggaaattcat acccacttta  
 540  
 acaagggtgtg aagcttatct tacagttgct aatgcctcac tgaccttttg gaaaggatcat  
 600  
 agttaccctt cacgcgt  
 617

&lt;210&gt; 5436

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5436

Met Asn Phe Pro Leu Gly Ser Lys Ala Trp Gly Thr Asn Leu Lys Gln  
 1 5 10 15  
 His Pro Leu Ile Ala Arg Ala Lys Gly Lys Thr Met Ala Ser Ser Asp  
 20 25 30  
 Gly Thr Ile Arg Ala Asn Leu Tyr Phe Lys Ile Leu Gln Pro Lys Met  
 35 40 45  
 Lys Asn Asn His Ile Arg Ser Cys Arg Ala Val Leu His Arg Ser Asp  
 50 55 60  
 Leu Leu Val Arg Lys Leu Leu Ala Leu Cys Lys Glu Lys Glu Asp Cys  
 65 70 75 80  
 Asn Arg Asn His Glu Pro Gly Arg Glu Met Gly Leu Glu Lys Gly Glu  
 85 90 95  
 Glu Asn Trp Met Ser Asp Ile Ser Glu Thr Gln Asp Pro Phe Leu Gln  
 100 105 110  
 Tyr Tyr Ser Thr Ile Val Met  
 115

&lt;210&gt; 5437

&lt;211&gt; 1422

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5437

ttccgcgggtg gaggggtgct atactgggat gcaggcgagg cggggactgg cagcaatcat  
 60  
 gccctgggag ctaacgtaga gctttggata atgcttttgc aagttgtacg agaagggaag  
 120  
 ttctcggggt ttctgacctc ctgcagcctc ctcttgccctc gggctgccca gatcttgagg  
 180  
 gctgaggctg gcttaccttc gagccgttcc ttcattgggat ttgctgctcc cttaccaaac  
 240  
 aagcgaaagg cttactcgga gcgtagaatc atgggggtact caatgcagga gatgtatgag  
 300

gtggtgtcca acgtccagga gtatcgtgag tttgtgccct ggtgtaagaa gtctctggtg  
 360  
 gtatccagcc gtaagggtca tttgaaagcc cagctggagg ttggctttcc acctgtcatg  
 420  
 gaacgttaca cctctgcagt ttccatggtc aaacctcaca tggtaaggc tgtttgtact  
 480  
 gatggcaagc tcttcaacca cttagagact atttggcgat tcagccctgg tattcctgcc  
 540  
 tatcctcgaa cctgcactgt ggacttttcg atttcctttg aatttcgttc tctgctgcac  
 600  
 tcccagctgg ccaccatggt ttttgatgag gttgtcaaac agaattgttc tgcctttgag  
 660  
 cgtcgggcag ccaccaagtt tggccagaa acagccatcc cccgtgaact gatgttccat  
 720  
 gaggtgcacc agacttgagg caagggattg ctccctgacc tcccttctac cccacttccc  
 780  
 tacacaattc tcttatttat ttggtttggc tctgtttcca atttgaaagg agtctgtgtt  
 840  
 cataatactg tttctcctct caatttccca gaaattgggt tctatgctgg ctggaaatgt  
 900  
 tgggggaaag agaaggcaaa ggatgtggaa atgagatgtg cttaggaaag ggtcaggccc  
 960  
 atcgtaggag caccatatgc ctgcagcctt ttcactacga attagaataa ggactatgtg  
 1020  
 gttgtctctg gaccttatca agacacctta gtgtctgacc aggggacgat agtaactttt  
 1080  
 ctaaggattg aataaattga gcttttcttc tggcacagag gtactgagt gtaagtaact  
 1140  
 tttaccctgc ctgagattcc tcaggagaaa aggcaacctg cctccagcct gaaatacata  
 1200  
 aagcctcatt ttaagactgt aagtccatgc tgccctggcta ctagagagca aggggctttc  
 1260  
 ttaccaccag tgctgaggag aaaagtactg aacggaaacg gagttgtctt tgtactcttg  
 1320  
 agttgtacct tattcttcca ctggcctga gtttttataa aatttcaata aattgtgaca  
 1380  
 gtgtgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1422

&lt;210&gt; 5438

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5438

Phe Arg Gly Gly Gly Val Leu Tyr Trp Asp Ala Gly Ala Ala Gly Thr  
 1 5 10 15  
 Gly Ser Asn His Ala Leu Gly Ala Asn Val Glu Leu Trp Ile Met Leu  
 20 25 30  
 Leu Gln Val Val Arg Glu Gly Lys Phe Ser Gly Phe Leu Thr Ser Cys  
 35 40 45  
 Ser Leu Leu Leu Pro Arg Ala Ala Gln Ile Leu Ala Ala Glu Ala Gly  
 50 55 60  
 Leu Pro Ser Ser Arg Ser Phe Met Gly Phe Ala Ala Pro Phe Thr Asn

65					70					75				80	
Lys	Arg	Lys	Ala	Tyr	Ser	Glu	Arg	Arg	Ile	Met	Gly	Tyr	Ser	Met	Gln
				85					90					95	
Glu	Met	Tyr	Glu	Val	Val	Ser	Asn	Val	Gln	Glu	Tyr	Arg	Glu	Phe	Val
			100					105					110		
Pro	Trp	Cys	Lys	Lys	Ser	Leu	Val	Val	Ser	Ser	Arg	Lys	Gly	His	Leu
		115				120						125			
Lys	Ala	Gln	Leu	Glu	Val	Gly	Phe	Pro	Pro	Val	Met	Glu	Arg	Tyr	Thr
	130					135				140					
Ser	Ala	Val	Ser	Met	Val	Lys	Pro	His	Met	Val	Lys	Ala	Val	Cys	Thr
145				150					155					160	
Asp	Gly	Lys	Leu	Phe	Asn	His	Leu	Glu	Thr	Ile	Trp	Arg	Phe	Ser	Pro
			165					170					175		
Gly	Ile	Pro	Ala	Tyr	Pro	Arg	Thr	Cys	Thr	Val	Asp	Phe	Ser	Ile	Ser
		180					185				190				
Phe	Glu	Phe	Arg	Ser	Leu	Leu	His	Ser	Gln	Leu	Ala	Thr	Met	Phe	Phe
	195				200						205				
Asp	Glu	Val	Val	Lys	Gln	Asn	Val	Ala	Ala	Phe	Glu	Arg	Arg	Ala	Ala
	210				215					220					
Thr	Lys	Phe	Gly	Pro	Glu	Thr	Ala	Ile	Pro	Arg	Glu	Leu	Met	Phe	His
225					230				235					240	
Glu	Val	His	Gln	Thr											
				245											

&lt;210&gt; 5439

&lt;211&gt; 4234

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5439

```

ggaggttctt cactcgcgac tgacggagct gcggtggcgt ctccacacgc aaccatgaag
60
ttgaaggaca caaatcaag gccaaagcag tcaagctgtg gcaaatttca gacaaagggg
120
atcaaagttg tgggaaaatg gaaggaagtg aagattgacc caaatatggt tgcagatgga
180
cagatggatg acttgggtgtg ctttgaggaa ttgacagatt accagttggt ctccctgcc
240
aagaatccct ccagtctctt ctcaaaggaa gcacccaaga gaaaggcaca agctgtttca
300
gaagaagagg aggaggagga gggaaagtct agctcaccaa agaaaaagat caagttgaag
360
aaaagtaaaa atgtagcaac tgaaggaacc agtaccaga agaatttga agtgaaagat
420
cctgagctgg aggccaggg agatgacatg gtttgtgatg atccggaggc tggggagatg
480
acatcagaaa acctggtcca aactgctcca aaaaagaaga aaaataaagg gaaaaaagg
540
ttggagcctt ctgagagcac tgctgccaaag gtgcccaaaa aagcgaagac atggattcct
600
gaagttcatg atcagaaagc agatgtgtca gcttgggaagg acctgtttgt tcccaggccg
660
gttctccgag cactcagctt tctaggtctt tctgcacca caccaatcca agcctgacc
720

```

ttggcacctg ccatccgtga caaactggac atccttgggg ctgctgagac aggaagtggg  
780  
aaaactcttg cctttgccat cccaatgatt catgcggtgt tgcagtggca gaagaggaat  
840  
gctgccctc ctccaagtaa caccgaagca ccacctggag agaccagaac tgaggccgga  
900  
gctgagacta gatcaccagg caaggtgaa gctgagtctg atgcattgcc tgacgatact  
960  
gtaattgaga gtgaagcact gccagtgat attgcagccg aggccagagc caagactgga  
1020  
ggcactgtct cagaccaggc gttgctcttt ggtgacgatg atgctggtga agggccttct  
1080  
tccctgatca gggagaaacc tgttcccaa cagaatgaga atgaggagga aaatcttgat  
1140  
aaagagcaga ctggaaatct aaaacaggag ttggatgaca aaagcgccac ctgtaaggca  
1200  
tatccaaagc gtcctctgct tggactggtt ctgactcca ctgagagct ggccgtccag  
1260  
gtcaaacagc acattgatgc tgtggccagg ttacaggaa ttaaaactgc tattttggtt  
1320  
ggtggaatgt ccacgcagaa acagcagagg atgctgaacc gtcgtcctga gattgtggtt  
1380  
gctactccag gccggtgtg ggaattaatt aaagaaaagc attatcattt gaggaacctt  
1440  
cggcagctca ggtgcctggt agtggatgag gctgaccgga tggttgagaa aggccatttt  
1500  
gctgagctct cacagctgct agagatgctc aatgactccc aatacaacc aaagagacaa  
1560  
acgcttgttt tttctgccac actcaccctg gtgcatcagg ctctgctcg aatccttcat  
1620  
aagaagcaca ccaagaaaat ggataaaaca gccaaacttg acctccttat gcagaaaatt  
1680  
ggcatgaggg gcaagcccaa ggtcattgac ctcaacaagga atgaggccac ggtggagacg  
1740  
ctaacagaga ccaagatcca ttgtgagact gatgagaaag acttctactt gtactacttc  
1800  
ctgatgcagt atccaggccg cagcttagtg ttgccaaca gtatctcctg catcaaacgc  
1860  
ctctctgggc tctcctaaagt ccttgatata atgcccttga cctgcatgc ctgtatgcac  
1920  
cagaagcaga ggctcagaaa cctggagcag ttgcccgtc tgggaagactg tgttctcttg  
1980  
gcaacagatg tggcggtctg ggtctggat attcctaaag tccagcatgt catccattac  
2040  
cagggtccac gtacctcgga gatttatgtc caccgaagtg gtcgaactgc tcgagctacc  
2100  
aatgaaggcc tcagtctgat gctcattggg cctgaggatg tgatcaactt taagaagatt  
2160  
tacaaaacgc tcaagaaaga tgaggatata cactgttcc ccgtgcagac aaaatacatg  
2220  
gatgtggtca aggagcgaat ccgttagct cgacagattg agaaatctga gtatcggaac  
2280  
ttccaggctt gcctgcacaa ctcttgatt gagcaggcag cagctgcctt ggagattgag  
2340



ctggaagaag acatgtataa gggaggaaaa gctgaccagc aagaagaacg tcggagacaa  
2400  
aagcagatga aggttctgaa gaaggagctg cgccacctgc tgtcccagcc actgtttacg  
2460  
gagagccaga aaaccaagta tcccactcag tctggcaagc cggccctgct tgtgtctgcc  
2520  
ccaagtaaga gcgagtctgc tttgagctgt ctctccaagc agaagaagaa gaagacaaaag  
2580  
aagccgaagg agccacagcc ggaacagcca cagccaagta caagtgcaaa ttaactgccc  
2640  
tggccaagtg tgctcagtgc tgcacattgg tttctgttct ctggctatct gcaaacctc  
2700  
tcccaccctt gtgtttcact ccaccacca ccccgagtaa aaaagtctcc ctctcttcca  
2760  
ctcacacca tagcgggaga gacctcatgc agatttgcag tgttttgag taagaattca  
2820  
atgcagcagc ttaatttttc tgtattgcag tgtttatagg cttcttgtgt gttaaacttg  
2880  
atttcataaa ttaaaaacaa tggtcagaaa aaaaaaaaa accggaaccg gcggcaccag  
2940  
ctcggagaga aatcgatgtt gtagtgacct tcagtaaaag agcggttttt catagaggtg  
3000  
ccgtttttaga ctacctatct aagaggcagc aaaaacaaat acatctaata ggttaagtaa  
3060  
aaaaccatct atttcggaca ataaaagtta tttctacac acgttggtct tcattttact  
3120  
cgtaaacagt atcatatc cttctaagct tatctttttg acgtgaaagt gtagtagtat  
3180  
gtctccacct ggcagctatg tagttaatat tttgtctgt tgtaatgtta tcaagtaccg  
3240  
aacattttcc taatgaaata gtggaaaaga caacctttt ctccatttct atttgattt  
3300  
ttagatcacg tacataacaa ggaatcgaat aaataatgaa gtgttttata aagagtatcc  
3360  
gtcttggagg gagattccag ttgggagggt ccataggcag ttcttaccaa gaagatgtcg  
3420  
attccattct ccaacacca ctaccgaatt ccacaaggat ttgggaatct tcttgaaggg  
3480  
ctgacacgag agattctgag agagcaaccg gacaatatac cagcttttgc agcagcctat  
3540  
tttgagagcc ttctagagaa aagagagaaa accaactttg atccagcaga atgggggag  
3600  
aaggtagaag accgcttcta taacaatcat gcattcgagg agcaagaacc acctgagaaa  
3660  
agtgatccta aacaagaaga gtctcagata tctgggaagg aggaagagac atcagtcacc  
3720  
atcttagact cttctgagga agataaggaa aaagaagagg ttgctgctgt caaatccaa  
3780  
gctgccttcc ggggacacat agccagagag gaggcaaaga aaatgaaaac aaatagtctt  
3840  
caaatgagg aaaaagagga aaacaagtga ggacactggt ttacctcca ggaaacatga  
3900  
aaaataatcc aaatccatca accttcttat taatgtcatt tctccttgag gaaggaagat  
3960

ttgatgttgt gaaataacat tcgttactgt tgtgaaaatc tgtcatgagc atttgtttaa  
 4020  
 taagcatacc attgaaacat gccacttgaa gatttctctg agatcatgag tttgtttaca  
 4080  
 cttgtctcaa gcctatctat agagaccctt ggatttagaa ttatagaact aaagtatctg  
 4140  
 agattacaga gatctcagag gttatgtgtt ctaactatta tcaaataaat aaatcctctc  
 4200  
 tatcacatcc cccaaaaaaaa aaaaaaaaaa aaaa  
 4234

<210> 5440

<211> 461

<212> PRT

<213> Homo sapiens

<400> 5440

Leu	Ala	Val	Gln	Val	Lys	Gln	His	Ile	Asp	Ala	Val	Ala	Arg	Phe	Thr
1			5					10						15	
Gly	Ile	Lys	Thr	Ala	Ile	Leu	Val	Gly	Gly	Met	Ser	Thr	Gln	Lys	Gln
			20					25					30		
Gln	Arg	Met	Leu	Asn	Arg	Arg	Pro	Glu	Ile	Val	Val	Ala	Thr	Pro	Gly
		35					40					45			
Arg	Leu	Trp	Glu	Leu	Ile	Lys	Glu	Lys	His	Tyr	His	Leu	Arg	Asn	Leu
	50					55					60				
Arg	Gln	Leu	Arg	Cys	Leu	Val	Val	Asp	Glu	Ala	Asp	Arg	Met	Val	Glu
65				70					75					80	
Lys	Gly	His	Phe	Ala	Glu	Leu	Ser	Gln	Leu	Leu	Glu	Met	Leu	Asn	Asp
			85					90						95	
Ser	Gln	Tyr	Asn	Pro	Lys	Arg	Gln	Thr	Leu	Val	Phe	Ser	Ala	Thr	Leu
			100					105					110		
Thr	Leu	Val	His	Gln	Ala	Pro	Ala	Arg	Ile	Leu	His	Lys	Lys	His	Thr
		115					120					125			
Lys	Lys	Met	Asp	Lys	Thr	Ala	Lys	Leu	Asp	Leu	Leu	Met	Gln	Lys	Ile
	130					135					140				
Gly	Met	Arg	Gly	Lys	Pro	Lys	Val	Ile	Asp	Leu	Thr	Arg	Asn	Glu	Ala
145				150					155					160	
Thr	Val	Glu	Thr	Leu	Thr	Glu	Thr	Lys	Ile	His	Cys	Glu	Thr	Asp	Glu
			165					170						175	
Lys	Asp	Phe	Tyr	Leu	Tyr	Tyr	Phe	Leu	Met	Gln	Tyr	Pro	Gly	Arg	Ser
			180					185					190		
Leu	Val	Phe	Ala	Asn	Ser	Ile	Ser	Cys	Ile	Lys	Arg	Leu	Ser	Gly	Leu
	195						200						205		
Leu	Lys	Val	Leu	Asp	Ile	Met	Pro	Leu	Thr	Leu	His	Ala	Cys	Met	His
	210					215					220				
Gln	Lys	Gln	Arg	Leu	Arg	Asn	Leu	Glu	Gln	Phe	Ala	Arg	Leu	Glu	Asp
225				230						235				240	
Cys	Val	Leu	Leu	Ala	Thr	Asp	Val	Ala	Ala	Arg	Gly	Leu	Asp	Ile	Pro
			245					250						255	
Lys	Val	Gln	His	Val	Ile	His	Tyr	Gln	Val	Pro	Arg	Thr	Ser	Glu	Ile
			260					265					270		
Tyr	Val	His	Arg	Ser	Gly	Arg	Thr	Ala	Arg	Ala	Thr	Asn	Glu	Gly	Leu
		275					280					285			
Ser	Leu	Met	Leu	Ile	Gly	Pro	Glu	Asp	Val	Ile	Asn	Phe	Lys	Lys	Ile

290	295	300
Tyr Lys Thr Leu Lys Lys Asp Glu Asp Ile Pro Leu Phe Pro Val Gln		
305	310	315
Thr Lys Tyr Met Asp Val Val Lys Glu Arg Ile Arg Leu Ala Arg Gln		
	325	330
Ile Glu Lys Ser Glu Tyr Arg Asn Phe Gln Ala Cys Leu His Asn Ser		
	340	345
Trp Ile Glu Gln Ala Ala Ala Ala Leu Glu Ile Glu Leu Glu Glu Asp		
	355	360
Met Tyr Lys Gly Gly Lys Ala Asp Gln Gln Glu Glu Arg Arg Arg Gln		
	370	375
Lys Gln Met Lys Val Leu Lys Lys Glu Leu Arg His Leu Leu Ser Gln		
385	390	395
Pro Leu Phe Thr Glu Ser Gln Lys Thr Lys Tyr Pro Thr Gln Ser Gly		
	405	410
Lys Pro Pro Leu Leu Val Ser Ala Pro Ser Lys Ser Glu Ser Ala Leu		
	420	425
Ser Cys Leu Ser Lys Gln Lys Lys Lys Lys Thr Lys Lys Pro Lys Glu		
	435	440
Pro Gln Pro Glu Gln Pro Gln Pro Ser Thr Ser Ala Asn		
450	455	460

&lt;210&gt; 5441

&lt;211&gt; 1635

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5441

```

ncagacacac tgtgacggct gcctgaagct agtgagtcgc ggcgcgcgc actggtggtt
60
gggtcagtgc cgcgcgcga tcggtcggtta ccgcgaggcg ctggtggcct tcaggctgga
120
cggcgcgggt cagccctggt tcgcgggctt ctgggtcttt gaacagccgc gatgtcgatc
180
ttcaccccca ccaaccagat ccgcctaacc aatgtggccg tggtaggat gaagcgtgcc
240
gggaagcgct tcgaaatgc ctgctacaaa aacaaggctc tcggctggcg gagcggcggtg
300
gaaaaagacc tcgatgaagt tctgcagacc cactcagtgt ttgtaaatgt ttctaaaggt
360
caggttgcca aaaaggaaga tctcatcagt gcgtttggaa cagatgacca aactgaaatc
420
tgtaagcaga ttttgactaa aggagaagtt caagtatcag ataaagaaag acacacacaa
480
ctggagcaga tgtttaggga cattgcaact attgtggcag acaaattgtg gaatcctgaa
540
acaaagagac catacaccgt gatccttatt gagagagcca tgaaggacat ccactattcg
600
gtgaaaacca acaagagtac aaaacagcag gctttggaag tgataaagca gttaaaagag
660
aaaatgaaga tagaacgtgc tcacatgagg cttegggttca tccttcagat gaatgaaggc
720
aagaagctga aagaaaagct caagccactg atcaaggcca tagaaagtga agattatggc
780

```

caacagttag aaatcgtatg tctgattgac cggggtgct tccgagaaat tgatgagcta  
 840  
 ataaaaaagg aaactaaagg caaaggttct ttggaagtac tcaatctgaa agatgtagaa  
 900  
 gaaggagatg agaaatttga atgacaccca tcaatctctt cacctctaaa acactaaagt  
 960  
 gtttcggttt cggacggcac tggttcatgt ctgtggctctg ccaaatactt gcttaaaacta  
 1020  
 tttgacattt tctatctttg tggttaacagt ggacacagca aggctttcct acataagtat  
 1080  
 aataatgtgg gaatgatttg gttttaatta taaactgggg tctaaatcct aaagcaaaat  
 1140  
 tgaaactcca agatgcaaag tccagagtgg cattttgcta ctctgtctca tgccttgata  
 1200  
 gctttccaaa atgaaagtta cttgaggcag ctcttggtgg tgaaaagtta tttgtacagt  
 1260  
 agagtaagat tattaggggt atgtctatac aacaaaaggg ggggtctttc ctaaaaaaga  
 1320  
 aaacatatga tgcttcattt ctacttaatg gaacttggtt tctgagggtc attatggtat  
 1380  
 cgtaataata agcttggtat atgttcttga ttatctgaga aacagatata gaaaaattgt  
 1440  
 gtcggactta aataattttc gttgaacatg ctgccataac ttagattatt cttgggttaa  
 1500  
 aaataaaagt cacttatttc taattcttaa agtttataat atatattaat atagctaaaa  
 1560  
 ttgtatgtaa tcaataaaac cactcttatg ttatttaaac tatggcttgt gtttctagac  
 1620  
 aaaaaaaaaa aaaaa  
 1635

&lt;210&gt; 5442

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5442

Met	Ser	Ile	Phe	Thr	Pro	Thr	Asn	Gln	Ile	Arg	Leu	Thr	Asn	Val	Ala
1				5					10					15	
Val	Val	Arg	Met	Lys	Arg	Ala	Gly	Lys	Arg	Phe	Glu	Ile	Ala	Cys	Tyr
		20						25					30		
Lys	Asn	Lys	Val	Val	Gly	Trp	Arg	Ser	Gly	Val	Glu	Lys	Asp	Leu	Asp
	35						40					45			
Glu	Val	Leu	Gln	Thr	His	Ser	Val	Phe	Val	Asn	Val	Ser	Lys	Gly	Gln
	50				55						60				
Val	Ala	Lys	Lys	Glu	Asp	Leu	Ile	Ser	Ala	Phe	Gly	Thr	Asp	Asp	Gln
65				70						75				80	
Thr	Glu	Ile	Cys	Lys	Gln	Ile	Leu	Thr	Lys	Gly	Glu	Val	Gln	Val	Ser
			85						90				95		
Asp	Lys	Glu	Arg	His	Thr	Gln	Leu	Glu	Gln	Met	Phe	Arg	Asp	Ile	Ala
			100						105				110		
Thr	Ile	Val	Ala	Asp	Lys	Cys	Val	Asn	Pro	Glu	Thr	Lys	Arg	Pro	Tyr
		115					120						125		
Thr	Val	Ile	Leu	Ile	Glu	Arg	Ala	Met	Lys	Asp	Ile	His	Tyr	Ser	Val

130	135	140
Lys Thr Asn Lys Ser Thr Lys Gln Gln Ala Leu Glu Val Ile Lys Gln		
145	150	155
Leu Lys Glu Lys Met Lys Ile Glu Arg Ala His Met Arg Leu Arg Phe		160
	165	170
Ile Leu Pro Val Asn Glu Gly Lys Lys Leu Lys Glu Lys Leu Lys Pro		175
	180	185
Leu Ile Lys Val Ile Glu Ser Glu Asp Tyr Gly Gln Gln Leu Glu Ile		190
	195	200
Val Cys Leu Ile Asp Pro Gly Cys Phe Arg Glu Ile Asp Glu Leu Ile		205
	210	215
Lys Lys Glu Thr Lys Gly Lys Gly Ser Leu Glu Val Leu Asn Leu Lys		220
225	230	235
Asp Val Glu Glu Gly Asp Glu Lys Phe Glu		240
	245	250

&lt;210&gt; 5443

&lt;211&gt; 2021

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5443

cagatgcaga cactcactca gcctctgcct cagagaggta ccatgggtcc tggccacatt  
 60  
 agggaaagtag gcacttgaac cacctgctgt ctctctagct tatgccttga ggcggtggat  
 120  
 ggggaggtgg cgtgttcct ctcactgca ataggatggt ccgaggtagc agtcctgaag  
 180  
 ggaacagcag ggatggtagg caggaagaat ggaggtctga ccaggctggc ggctgggaat  
 240  
 gaagccaggc ctttgcctt ccttggcacc tctcacaggc cctgcccctt gctccacagg  
 300  
 ctggaggaag tccccctgga ggtgctgagg cagagggagt ccaagtggct ggacatgctc  
 360  
 aacaactggg acaaatggat ggccaagaag cacaaaaaga ttcgtctgcg gtgccaaaag  
 420  
 ggcatcccg cttctctgcg gggccgtgct tggcagtagc tgtcaggagg caaggagaag  
 480  
 ttacagcaga accctggaaa gtttgacgag ctggacatgt cccctgggga cccaagtgg  
 540  
 ctggacgtga ttgagcgtga cctgcaccgg cagttcccat tccatgagat gtttgtgtcc  
 600  
 cggggggggc acggccagca ggacctatc cgtgtgctga aggcctacac gctgtaccgg  
 660  
 cccgaggagg gctactgcca ggcccaggcg cccattgccg ctgtcttgct catgcatatg  
 720  
 cctgctgagc aagccttctg gtgcctggta cagatctgtg agaagtacct gccgggctac  
 780  
 tacagcaga aactggaggc gatccagctg gacggggaga tccttttctc gctgttgacg  
 840  
 aaggtgtcgc cgggtggcca caagcacctc agccgtcaga agatcgaccc gctcctctat  
 900  
 atgacagaat ggttcatgtg cgccttctcc cgaaccttgc cttggagctc tgtgtgcgt  
 960

gtctgggāca tgttcttctg tgaaggggtc aagatcatct tccgggtggg gctggtgctg  
 1020  
 ctgaagcacg cgctgggctc ccctgagaag gtcaaagcct gccagggcca gtacgagacc  
 1080  
 atcgagcgac tgcggagcct cagccccaag atcatgcagg aggcctttct ggtccaggag  
 1140  
 gtggtggagt tgcccgtagc agagcgccag attgagcgcg aacacctcat tcagctgcgg  
 1200  
 cgctggcagg agaccggggg tgagctgcag tgccgctccc cgcccaggct gcatggtgcc  
 1260  
 aaggctatct tggatgcaga acctgggtccc cggcctgccc tacaaccttc accatccatc  
 1320  
 cgctgcccc tagatgcccc cctccctggc tccaaagcca agcccaagcc acccaagcag  
 1380  
 gcccagaagg agcagcggaa acagatgaag gggagagggc agctggagaa gccccagcc  
 1440  
 ccaaatcaag ccatggtggt ggccgctgca ggagatgcat gtccccaca gcatgtgccc  
 1500  
 ccgaaggact cagcccccaa ggactcagcc cctcaggatt tggctcccca ggtctcagcc  
 1560  
 caccaccgct cccaggagag cttgacgtcc caagagagtg aggacaccta cttgtaacct  
 1620  
 tggcagctaa ggctccagg gcggggtctc catataacta cacggttcat gaactgacat  
 1680  
 tccacatcct gccaccctc tgagggccaa gctgcctggc cactgggctg ggctggagtc  
 1740  
 tggctggtcc aacacagatt ctgctggtc caacacagat tctgctgag cctccttatt  
 1800  
 tattttcttt acagtggcac tcaggctggc ccagccaggg caggcagaag ctagggcctg  
 1860  
 gggggtgggg cctccttcag cccctcctc ctgggggatg ctccccaggg ttagggtgct  
 1920  
 ggtgtgaggg gaaaggggtg ggtgttcttt gtgtaaaata gaaacatggt tttgtacaga  
 1980  
 aataaacagc cttgtataga gaaaaaaaaa aaaaaaaaaa a  
 2021

&lt;210&gt; 5444

&lt;211&gt; 438

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5444

Leu	Glu	Glu	Val	Pro	Leu	Glu	Val	Leu	Arg	Gln	Arg	Glu	Ser	Lys	Trp
1			5						10					15	
Leu	Asp	Met	Leu	Asn	Asn	Trp	Asp	Lys	Trp	Met	Ala	Lys	Lys	His	Lys
			20					25					30		
Lys	Ile	Arg	Leu	Arg	Cys	Gln	Lys	Gly	Ile	Pro	Pro	Ser	Leu	Arg	Gly
			35				40					45			
Arg	Ala	Trp	Gln	Tyr	Leu	Ser	Gly	Gly	Lys	Val	Lys	Leu	Gln	Gln	Asn
			50			55				60					
Pro	Gly	Lys	Phe	Asp	Glu	Leu	Asp	Met	Ser	Pro	Gly	Asp	Pro	Lys	Trp
			65			70				75				80	
Leu	Asp	Val	Ile	Glu	Arg	Asp	Leu	His	Arg	Gln	Phe	Pro	Phe	His	Glu

```
<210> 5445
<211> 1187
<212> DNA
<213> Homo sapiens
```

4627

agaaaaggcg ggggtcggac tgacgccgtc ctgggccatg tccacgtctg gggctctgag  
 120  
 gttccatctc cctttccact gtgcctaacc ttacatctat tacctacatc cagcaagaca  
 180  
 cgattttcca cgatgagttg attcgtaatt ccatttatgt gctagttttt agaattttcc  
 240  
 tgtgggtttt tttttactta cttatgattt taattttgtt tgctttaaaa aaaacacatg  
 300  
 cataggaaaag aatgcttcct ttcatttcaa ttaaaaacaa caaattgctt ttttttaagc  
 360  
 aaaaattcat tgaggggggg gctcgcgttg taaaagaaa atcagacca cgggatggc  
 420  
 tgtgatcaaa gagacagtaa caagggtagg gaggtggaga tgcaatcca aacacacaac  
 480  
 ttgtgcaaag gtcaagtggc cacagccgcc acggaaaaca ggctggcggg tctccgacg  
 540  
 ttcaacacac agtcgccacg ggacacagtg gttccacccc cagggtgtgca gcaatagaca  
 600  
 tcacagccca cgtccgcacg cagactcgga cagcgtgct cacagcccac gttcgcacgc  
 660  
 agactcagac atgcgtgctc acagcctcag tcatgacagc cagacagtgg aaacaaggca  
 720  
 ggtgggcctc ggctgctgag ggagcaacag cagaacggtg ctcagccctg gagaggaagg  
 780  
 acgcctggac cctggcccca caccacagca tccacaatgt ggtgccaacc aacaggccac  
 840  
 gcacacagag gccatgggcc agacgcttcc actgacacga aatgcccag agaggcacag  
 900  
 ccggcgacag aacggggacc cgtgtctgcc gccccaggag aggctgcagg ccggaaactg  
 960  
 gaggattaca gggcgcgagt gtcgttttag ggagatgaaa atgttctaaa attggctgtg  
 1020  
 gcaattgttg cacaactctg caaatatact aaaaaccact gaattgtaca tttcaaaatg  
 1080  
 ggtgaattgt acggtgcttg tattatacct caataaagct atttttaag aaacaaaatt  
 1140  
 ttaaatacgt aaaaaaatca gaaagtgaat tctggaatta acattcc  
 1187

&lt;210&gt; 5446

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5446

Met Ala Val Ile Lys Glu Thr Val Thr Arg Val Gly Arg Trp Arg Cys  
 1 5 10 15  
 Glu Ser Lys His Thr Thr Cys Ala Lys Val Lys Trp Pro Gln Pro Pro  
 20 25 30  
 Arg Lys Thr Gly Trp Arg Phe Leu Arg Arg Ser Thr His Ser Arg His  
 35 40 45  
 Gly Thr Gln Trp Phe His Pro Gln Val Cys Ser Asn Arg His His Ser  
 50 55 60  
 Pro Arg Pro His Ala Asp Ser Asp Thr Arg Ala His Ser Pro Arg Ser



65		70		75		80									
His	Ala	Asp	Ser	Asp	Met	Arg	Ala	His	Ser	Leu	Ser	His	Asp	Ser	Gln
				85					90					95	
Thr	Val	Glu	Thr	Arg	Gln	Val	Gly	Leu	Gly	Cys					
			100					105							

&lt;210&gt; 5447

&lt;211&gt; 1444

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5447

```

nngcaggtaa gtggtaccat catatgcccg ggacaatttg gcttgcttgt ccaagtttgc
60
aatttgctgc tttgtgaaag tgggcttcaa cacatacgtg atatcctcca atgaggaatc
120
gatgatctca tagttgtact ttgcagtaag aagacttttc agatcaccaa acaaggagat
180
ggcgttgact ttctgtcttg gtttctgaat gctctgcact cagctctggg gggcacaag
240
aagaaaaaga agactattgt gactgatgtt ttccaggggt ccattgaggat cttcactaaa
300
aagcttcccc atcctgatct gccagcagaa gaaaaagagc agttgctcca taatgacgag
360
taccaggaga caatgggtga gtccactttt atgtacctga cgctggacct tcctactgcc
420
ccccctaca aggacgagaa ggagcagctc atcattcccc aagtgccact cttcaacatc
480
ctggctaagt tcaatggcat cactgagaag gaataaaga cttacaagga gaactttctg
540
aagcgcttcc agcttaccaa gttgcctcca tatctaact tttgtatcaa gagattcact
600
aagaacaact tctttgttga gaagaatcca actnattgtc aatttccta ttacaaatgt
660
ggatctgaga gaatacttgt ctgaagaagt acaagcagta cacaagaata ccacctatga
720
cctcattgcc aacatcgtgc atgacggcaa gccctccgag ggctcctacc ggatccacgt
780
gcttcatcat gggacaggca aatgggtatga attacaagac ctccagggtga ctgacatcct
840
tccccagatg atcacactgt cagaggctta cattcagatt tggaagaggc gagataatga
900
tgaaaccaac cagcaggggg cttgaaggag gcgtctaggg ctttgctccc aagggtgtg
960
gctgatgatg gtaaataaga acacagaagc tgtagctgaa cacaggctgg ctggtgggct
1020
tcctaggcca gccagcttg tatgggttct ggctacacca gagcaccaag agccacttg
1080
cctgggatgg cccacactg tcaactcagct gttctttgat ctttttttc tagattgatg
1140
ctctttctc ccatgcattg agctcccatc tagcttcagc agggcagaac ccttctccag
1200
atgtgtgtaa cttatgtctt gagtatctgg gagtagttga agaacagata attccttcca
1260

```

aacatcaagc cttgggattc ttggagcaag cagaaagcca gtaacttcgc tctgttagag  
 1320  
 gtggaggatt ttcctatggt tccccccatt tctgatttg tattttttaga tggattaaat  
 1380  
 agtctcctgt ttttaaacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1440  
 aaaa  
 1444

&lt;210&gt; 5448

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5448

Gly Ile Asp Asp Leu Ile Val Val Leu Cys Ser Lys Lys Thr Phe Gln  
 1 5 10 15  
 Ile Thr Lys Gln Gly Asp Gly Val Asp Phe Leu Ser Trp Phe Leu Asn  
 20 25 30  
 Ala Leu His Ser Ala Leu Gly Gly Thr Lys Lys Lys Lys Lys Thr Ile  
 35 40 45  
 Val Thr Asp Val Phe Gln Gly Ser Met Arg Ile Phe Thr Lys Lys Leu  
 50 55 60  
 Pro His Pro Asp Leu Pro Ala Glu Glu Lys Glu Gln Leu Leu His Asn  
 65 70 75 80  
 Asp Glu Tyr Gln Glu Thr Met Val Glu Ser Thr Phe Met Tyr Leu Thr  
 85 90 95  
 Leu Asp Leu Pro Thr Ala Pro Leu Tyr Lys Asp Glu Lys Glu Gln Leu  
 100 105 110  
 Ile Ile Pro Gln Val Pro Leu Phe Asn Ile Leu Ala Lys Phe Asn Gly  
 115 120 125  
 Ile Thr Glu Lys Glu Tyr Lys Thr Tyr Lys Glu Asn Phe Leu Lys Arg  
 130 135 140  
 Phe Gln Leu Thr Lys Leu Pro Pro Tyr Leu Ile Phe Cys Ile Lys Arg  
 145 150 155 160  
 Phe Thr Lys Asn Asn Phe Phe Val Glu Lys Asn Pro Thr Xaa Cys Gln  
 165 170 175  
 Phe Pro Tyr Tyr Lys Cys Gly Ser Glu Arg Ile Leu Val  
 180 185

&lt;210&gt; 5449

&lt;211&gt; 1359

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5449

tctccagagg aggaccagag gacttatggt ttccgggccc agagcgctga aatgaaggaa  
 60  
 cgagggggca accagaccag tggcatcgac ttctttatta cccaagaacg gattgttttc  
 120  
 ctggacacac agcccatcct gagcccttct atcctagacc atctcatcaa taatgaccgc  
 180  
 aaactgcctc cagagtacaa ccttccccac acttacgttg aaatgcagtc actccagatt  
 240

gctgccttcc ttttcacggt ctgccatgtg gggattnttg tccaggactg gttcacagac  
 300  
 ctcagtctct acaggttctt gcagacagca gagatgggtga agccctccac cccatccccc  
 360  
 agccacgagt ccagcagctc atcgggctcc gatgaaggca ccgagtacta cccccaccta  
 420  
 gtcttcttcc agaacaaagc tcgcccagag gacttctgtc ctcggaagct gcggcagatg  
 480  
 cacctgatga ttgaccagct catggcccac tcccacctgc gttacaaggg aactctgtcc  
 540  
 atgttacaat gcaatgtctt cccggggctt ccacctgact tcttggactc tgaggtaaac  
 600  
 ttattcttgg tacccttcat ggacagtga gacagagagtg aaaaccacc aagagcagga  
 660  
 cctggttcca gccactctt ctccctgtg cctgggtatc gtggccacc cagtttccag  
 720  
 tccttgggtg gcaagctccg gagccaagt atgtccatgg cccggccaca gctgtcacac  
 780  
 acgatcctca ccgagaagaa ctggttccac tacgtgtccc ggatctggga tggggtgaga  
 840  
 aagtcctctg ctctggcaga gtacagccgc ctgctggcct gaggccaagg agaggaatgt  
 900  
 catgcagggg acctcctggg tccgcagtgt actgcagggg agcacagatg tccatccccc  
 960  
 gctgggggtg agagcggcag caggcctgat ggatgaggga tctgtggctc ccggcccaga  
 1020  
 gacatgaggt gtccaggggc agggccccca ccctcagttg gggtgttcc gggggtgact  
 1080  
 gtgagcgatc ccacccaaa cctgagatgg ggcagcccgt cctgtgtcct ccacagggac  
 1140  
 aagcagtggt aggagtctga atggtcacca ggaagcccgg gctccatctt gacctcctt  
 1200  
 ttcagggaca ggagcaacag gccctcttcc cctgactcta agcccttccc tgtaaggatg  
 1260  
 ggcagggtct ggagagctct ttattggaac agatctgggt gttcaaataa acacagtcac  
 1320  
 gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1359

&lt;210&gt; 5450

&lt;211&gt; 293

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5450

Ser	Pro	Glu	Glu	Asp	Gln	Arg	Thr	Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala
1			5					10					15		
Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn	Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe
		20					25					30			
Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe	Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser
		35				40					45				
Pro	Ser	Ile	Leu	Asp	His	Leu	Ile	Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro
	50					55				60					
Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr	Val	Glu	Met	Gln	Ser	Leu	Gln	Ile

65					70					75				80	
Ala	Ala	Phe	Leu	Phe	Thr	Val	Cys	His	Val	Gly	Ile	Xaa	Val	Gln	Asp
				85						90				95	
Trp	Phe	Thr	Asp	Leu	Ser	Leu	Tyr	Arg	Phe	Leu	Gln	Thr	Ala	Glu	Met
			100					105					110		
Val	Lys	Pro	Ser	Thr	Pro	Ser	Pro	Ser	His	Glu	Ser	Ser	Ser	Ser	Ser
		115					120					125			
Gly	Ser	Asp	Glu	Gly	Thr	Glu	Tyr	Tyr	Pro	His	Leu	Val	Phe	Phe	Gln
		130				135					140				
Asn	Lys	Ala	Arg	Arg	Glu	Asp	Phe	Cys	Pro	Arg	Lys	Leu	Arg	Gln	Met
145					150					155				160	
His	Leu	Met	Ile	Asp	Gln	Leu	Met	Ala	His	Ser	His	Leu	Arg	Tyr	Lys
			165						170					175	
Gly	Thr	Leu	Ser	Met	Leu	Gln	Cys	Asn	Val	Phe	Pro	Gly	Leu	Pro	Pro
		180						185					190		
Asp	Phe	Leu	Asp	Ser	Glu	Val	Asn	Leu	Phe	Leu	Val	Pro	Phe	Met	Asp
		195					200					205			
Ser	Glu	Ala	Glu	Ser	Glu	Asn	Pro	Pro	Arg	Ala	Gly	Pro	Gly	Ser	Ser
		210				215					220				
Pro	Leu	Phe	Ser	Leu	Leu	Pro	Gly	Tyr	Arg	Gly	His	Pro	Ser	Phe	Gln
225					230					235				240	
Ser	Leu	Val	Ser	Lys	Leu	Arg	Ser	Gln	Val	Met	Ser	Met	Ala	Arg	Pro
			245						250				255		
Gln	Leu	Ser	His	Thr	Ile	Leu	Thr	Glu	Lys	Asn	Trp	Phe	His	Tyr	Ala
		260						265					270		
Ala	Arg	Ile	Trp	Asp	Gly	Val	Arg	Lys	Ser	Ser	Ala	Leu	Ala	Glu	Tyr
		275					280						285		
Ser	Arg	Leu	Leu	Ala											
		290													

&lt;210&gt; 5451

&lt;211&gt; 1184

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5451

ncacgcctgg ctaaattttg tatttttggg agagacgggg ttccacgtgt tggccaggct  
 60  
 ggtctcgaac tgetgacctc aagtgatctg tccgcctcag cctcccaaag tgctgggatt  
 120  
 acagatgtga gccatcatgc cgggctaatt tttttgtatt ttagtagaga cagggtttca  
 180  
 ccgtgttagc caggatgggc ttgatctcct gaccttgtga tccaccagcc tcagcctccc  
 240  
 aaagtgtctg gattacaggc gtgagccact gtgcccggcc aagaattttt ttatcgataa  
 300  
 catagtgagc tctctgcctc ttcggaacga tgtccacttt gcttatgate aaccaagca  
 360  
 ggactettct ctccctggac gcctctcccc tggctctggaa tcttccagtt ctgccagaat  
 420  
 tggcctttcc cagatgctgc aaacttccag ttgaaccctt ttttctgtgt ggcccttggg  
 480  
 gctgcgagac caaaatccat gagttctgtg taccctagac ctttgggaagg tgagagcagg  
 540

gccctgagaa aaggcagcca cctcctctcc ctggtggaac ccttgcaccc ctactcctca  
 600  
 ccagaattgt cagtggcctt tcaccacagt ggtccttctt gcctgagccc tgcactgtcc  
 660  
 cagaccacac agaagtcttg tcacctctgg gcgcctggga tggtcaccga agagaagcac  
 720  
 gctgtccccg tctctcttgg cttctgccag aaaatcgaac aagtgaatt aacacactgt  
 780  
 tactgccgaa gcttgaact ccaggactt gtccttgatc cttccagaaa ccaccaggtc  
 840  
 cggcacttgg agccccccgg agagggacct ccagccgag ccctcaaaga actccatgaa  
 900  
 atcaggaact gcttgatgaa atgtatctcc ttgtacctgg aagatgaagc ccaaaccacc  
 960  
 acacctctgt ctccccagg gctcgggatg tctccagcag ccgggccacg cagcttcccc  
 1020  
 ggtgggctcg gggaggtggg agcagggacc atctctgtcc cctccaccct cactccatcc  
 1080  
 acctcggaga ccacctccc ccagccagat acggaataaa actacagacg cagacgtcgg  
 1140  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
 1184

&lt;210&gt; 5452

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5452

Met	Ser	Ser	Val	Tyr	Pro	Arg	Pro	Leu	Glu	Gly	Glu	Ser	Arg	Ala	Leu
1				5					10					15	
Arg	Lys	Gly	Ser	His	Leu	Leu	Ser	Leu	Ala	Glu	Pro	Leu	Pro	Pro	Tyr
			20					25					30		
Ser	Ser	Pro	Glu	Leu	Ser	Val	Ala	Phe	His	His	Ser	Gly	Pro	Ser	Cys
		35					40					45			
Leu	Ser	Pro	Ala	Leu	Ser	Gln	Thr	Thr	Gln	Lys	Ser	Gly	His	Leu	Trp
	50					55					60				
Ala	Pro	Gly	Met	Val	Thr	Glu	Glu	Lys	His	Ala	Val	Pro	Val	Ser	Pro
65					70					75				80	
Gly	Phe	Cys	Gln	Lys	Ile	Glu	Gln	Val	Gln	Leu	Thr	His	Cys	Tyr	Cys
				85				90						95	
Arg	Ser	Leu	Lys	Leu	Pro	Gly	Leu	Val	Leu	Asp	Pro	Ser	Arg	Asn	His
			100					105						110	
Gln	Val	Arg	His	Leu	Glu	Pro	Pro	Gly	Glu	Gly	Pro	Pro	Ser	Arg	Ala
		115					120					125			
Leu	Lys	Glu	Leu	His	Glu	Ile	Arg	Asn	Cys	Leu	Met	Lys	Cys	Ile	Ser
	130					135					140				
Leu	Tyr	Leu	Glu	Asp	Glu	Ala	Gln	Thr	Pro	Thr	Pro	Leu	Ser	Pro	Pro
145					150					155				160	
Gly	Leu	Gly	Met	Ser	Pro	Ala	Ala	Arg	Pro	Arg	Ser	Phe	Pro	Gly	Gly
				165				170						175	
Leu	Gly	Glu	Val	Gly	Ala	Gly	Thr	Ile	Ser	Val	Pro	Ser	Thr	Leu	Thr
			180					185						190	
Pro	Ser	Thr	Ser	Glu	Thr	Thr	Leu	Pro	Gln	Pro	Asp	Thr	Glu		

195

200

205

&lt;210&gt; 5453

&lt;211&gt; 1974

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5453

ntcggcaggc cggccatgga gccaggcagc gtggagaacc tgtccatcgt gtaccggagc  
60  
cgcgacttcc tgggtggtcaa caagcactgg gacgttcgca ttgacagcaa ggcgtggcgg  
120  
gagactctga ccctgcagaa gcagctgcgg taccgctttc ccgagctggc cgacctgac  
180  
acctgctacg ggttcagggt ctgccaccag ctggatttct ccaccagcgg ggcgtgtg  
240  
gtggccctaa acaaggcagc cgcgggcagc gcgtacaggt gtttcaagga gcggcgcgtg  
300  
accaaggctt acctggcatt gctgcggggg cacatccagg agagccgggt aaccatcagc  
360  
catgccattg gcaggaacag cacggagggc cgggccca ccatgtgcat cgagggtcgt  
420  
cagggtgtgg caggttgtga gaacccaaag ccaagcctca cagatctcgt ggttctggaa  
480  
cacgggtgtg acgcaggcga tcctgtctcc aaagtgtgc tgaagccgct cacgggccgg  
540  
acacaccagc tgcgcgtgca ctgcagtgcc ctgggccacc ccgtgggtgg cgacctgacc  
600  
tacggagaag tctcggggcg ggaggaccgg ccgttcagaa tgatgctgca cgctttctac  
660  
ctgcgcattc ccacggacac cgagtgtgtg gaggtctgca cgctgacct ctctctgcc  
720  
tccttgatg cctgctggag ccccccacaca ctgctgcagt cgtggacca gctcgtgacg  
780  
gccttacggg ccacccccga ccctgacccc gaggataggg gcccaggcc aggcagcccc  
840  
tcgcactcc tgctgggccc cggccggcct cctccacccc caaccaagcc ccctgagact  
900  
gaggcacagc ggggcccctg cctgcagtgg ctgtcggagt ggacgctgga accggacagc  
960  
tgagagccgt ggggctgggg cagggggtgt cagctgcaca gcgggactct agggagatgg  
1020  
gcgagcgagc gtctgtcac tggtctggg gcctcgaggt gccaggcagc atcaggccca  
1080  
ctgggttgcc ccggccaggc ctgcgaggaa gggctgaggt ggggccggca gggggcgcca  
1140  
ggcagccgtg atcacagtg acgaccgcac cgcggccgtg ggactgatgc gggatccccg  
1200  
ggccttctc gccacatgc cccgggagaa accgaggccc ctccctctc ctggaacagc  
1260  
ttccggtct caagcgtcac cccaggggcg tcagttttac ggactcaagg tcacctcagg  
1320  
aagaggcagg gccaggtttt gggataggct ttgcctccag gatgggctgc tctgggcct  
1380

ggtgagctac tgcccccaac ctaccctcta gaggggctgg gaagggccgt tctgggctca  
 1440  
 cctggcctgg gagaccatc tggctcctgc gtccctctgcc cctcactgct ctgtgcagat  
 1500  
 cctgtcgcgc tcagctgcct cctcccgaga cctaattggtc cctgctgggc tcgagtctgc  
 1560  
 aggcccggt gcgtgtgcct tggcctcact gtaccagtgg ttccctctct gcccggttc  
 1620  
 tgagctcagt gtggtgtttg gtgcacaggg gttggtcagg ggccatggcc aaggccctgc  
 1680  
 cagcagccc catccctcag atccactgtg agcaccaacc tgcctgcagtc tcttgggccc  
 1740  
 ctgctggcag ctctgccacg tcaccgctg cctggctccc acacagccat gcattgtcac  
 1800  
 tctgcctcgg ggaccccgag ttgggagctg tgggtctgcc aggtccacc tctctgtcc  
 1860  
 cccatgccac aacctgggct cctggctaca gcagggtcc agggactcca aataaatgtt  
 1920  
 cagtgactgg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
 1974

&lt;210&gt; 5454

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5454

Xaa	Gly	Arg	Pro	Ala	Met	Glu	Pro	Gly	Ser	Val	Glu	Asn	Leu	Ser	Ile
1				5					10					15	
Val	Tyr	Arg	Ser	Arg	Asp	Phe	Leu	Val	Val	Asn	Lys	His	Trp	Asp	Val
			20					25					30		
Arg	Ile	Asp	Ser	Lys	Ala	Trp	Arg	Glu	Thr	Leu	Thr	Leu	Gln	Lys	Gln
		35					40					45			
Leu	Arg	Tyr	Arg	Phe	Pro	Glu	Leu	Ala	Asp	Pro	Asp	Thr	Cys	Tyr	Gly
	50					55				60					
Phe	Arg	Phe	Cys	His	Gln	Leu	Asp	Phe	Ser	Thr	Ser	Gly	Ala	Leu	Cys
65				70					75					80	
Val	Ala	Leu	Asn	Lys	Ala	Ala	Ala	Gly	Ser	Ala	Tyr	Arg	Cys	Phe	Lys
			85					90					95		
Glu	Arg	Arg	Val	Thr	Lys	Ala	Tyr	Leu	Ala	Leu	Leu	Arg	Gly	His	Ile
			100					105					110		
Gln	Glu	Ser	Arg	Val	Thr	Ile	Ser	His	Ala	Ile	Gly	Arg	Asn	Ser	Thr
		115					120					125			
Glu	Gly	Arg	Ala	His	Thr	Met	Cys	Ile	Glu	Gly	Ser	Gln	Gly	Val	Ala
	130					135					140				
Gly	Cys	Glu	Asn	Pro	Lys	Pro	Ser	Leu	Thr	Asp	Leu	Val	Val	Leu	Glu
145				150						155				160	
His	Gly	Leu	Tyr	Ala	Gly	Asp	Pro	Val	Ser	Lys	Val	Leu	Leu	Lys	Pro
			165					170						175	
Leu	Thr	Gly	Arg	Thr	His	Gln	Leu	Arg	Val	His	Cys	Ser	Ala	Leu	Gly
		180						185					190		
His	Pro	Val	Val	Gly	Asp	Leu	Thr	Tyr	Gly	Glu	Val	Ser	Gly	Arg	Glu
		195					200					205			
Asp	Arg	Pro	Phe	Arg	Met	Met	Leu	His	Ala	Phe	Tyr	Leu	Arg	Ile	Pro

210		215		220	
Thr Asp Thr Glu Cys Val Glu Val Cys Thr Pro Asp Pro Phe Leu Pro					
225		230		235	240
Ser Leu Asp Ala Cys Trp Ser Pro His Thr Leu Leu Gln Ser Leu Asp					
	245		250		255
Gln Leu Val Gln Ala Leu Arg Ala Thr Pro Asp Pro Asp Pro Glu Asp					
	260		265		270
Arg Gly Pro Arg Pro Gly Ser Pro Ser Ala Leu Leu Pro Gly Pro Gly					
	275		280		285
Arg Pro Pro Pro Pro Thr Lys Pro Pro Glu Thr Glu Ala Gln Arg					
	290		295		300
Gly Pro Cys Leu Gln Trp Leu Ser Glu Trp Thr Leu Glu Pro Asp Ser					
305		310		315	320

&lt;210&gt; 5455

&lt;211&gt; 975

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5455

```

nggtgaggct caaactctct cttctcctt gtcataacta ttggtttaca gtctttatct
60
gtttaaaagt aaagcacatt gtatgtatct atttggaat acatgaggcc attaaaaccc
120
tgagcctaag gtaccacagt tagtctcatt tgctcttct cctgtgaact ccacttagaa
180
tgtcattgaa cttgggcaga cataattcta gtgtctgttc caaacgcact gtgtcacaga
240
agctagaatt accattagag gcacaaaccc ctgagaatac acaagggggc acgcttcag
300
tagatgtgtt ggggaaggag gagggcagag gggacagggg acaggattca gctttgtggt
360
gggtcctgag ggttcctacc aggggtagcc aggatctggg aaacagatca gcgactctag
420
tctgaagtgg ctgcctgggt cgggggctgc cttcagcaag attcaggcag gagagacgga
480
aatagccacc ttccaggcgt ggtcctgga gataaaaatg gattttaacc taggactgcc
540
gggagctggc cctccgcggt tgctcagact agggctgtgt gtgtgggtc tcgctgttt
600
cgggtgtcta actggcttgt ttctctttat ggcttggtt cattccgacc tggggtgggg
660
ccacatcaa cccactgcc actggctgtc cgtctggcct gcccgcgggt tccaaccaca
720
gtggtgaagc agcgcttgca gatgtacaac tcgcagcacc ggtcagcaat cagctgcac
780
cggacggtgt ggaggaccga ggggttgggg gccttctacc ggagctacac cagcagctg
840
accatgaaca tccccttcca gtccatccac ttcacacat atgagttcct gcaggagcag
900
gtcaaccccc accggacct caaccgcag tccacatca tctcaggcgg gctggccggg
960
gccctcgccg cggcg
975

```



<210> 5456  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 5456  
 Pro Arg Thr Ala Gly Ser Trp Pro Ser Ala Ala Ala Gln Thr Arg Ala  
 1 5 10 15  
 Val Cys Ala Gly Ser Arg Leu Phe Pro Val Ser Asn Trp Leu Val Ser  
 20 25 30  
 Leu Tyr Gly Leu Ala Ser Phe Arg Pro Gly Val Gly Pro His Pro Thr  
 35 40 45  
 His Cys Pro Leu Ala Val Arg Leu Ala Cys Pro Ala Val Pro Thr Thr  
 50 55 60  
 Val Val Lys Gln Arg Leu Gln Met Tyr Asn Ser Gln His Arg Ser Ala  
 65 70 75 80  
 Ile Ser Cys Ile Arg Thr Val Trp Arg Thr Glu Gly Leu Gly Ala Phe  
 85 90 95  
 Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Ile Pro Phe Gln Ser  
 100 105 110  
 Ile His Phe Ile Thr Tyr Glu Phe Leu Gln Glu Gln Val Asn Pro His  
 115 120 125  
 Arg Thr Tyr Asn Pro Gln Ser His Ile Ile Ser Gly Gly Leu Ala Gly  
 130 135 140  
 Ala Leu Ala Ala Ala  
 145

<210> 5457  
 <211> 448  
 <212> DNA  
 <213> Homo sapiens

<400> 5457  
 cgcagcggga gcgtgggcag ccaggcgggtg gcgcggagga tggatgggga cagccgagat  
 60  
 ggcggcggcg gcaaggacgc caccgggtcg gaggactacg agaacctgcc gactagcgcc  
 120  
 tccgtgtcca cccacatgac agcaggagcg atggccggga tccaggagca ctcggtcatg  
 180  
 taccgggtgg actcggtgaa ggtaatgtgg actgtggagc tctgtgctgg tcaactttcaa  
 240  
 ccctgaacct gatgctactt attttgcagt tctaagtga aagtcggcct ggtggatgct  
 300  
 tcccattata atattaaatt tgcttcttcg tgaggtcaca cctcacatcc ccagtgtcac  
 360  
 ttttaataact agtgtttttt acatgggtggg ccatgaccca ttagtggact ctgcatttaa  
 420  
 aaataaataa ataaataaaa gaaaaaaaa  
 448

<210> 5458  
 <211> 81  
 <212> PRT

<213> Homo sapiens

<400> 5458

```

Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg Met Asp Gly
 1             5             10             15
Asp Ser Arg Asp Gly Gly Gly Gly Lys Asp Ala Thr Gly Ser Glu Asp
      20             25             30
Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His Met Thr Ala
      35             40             45
Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr Pro Val Asp
      50             55             60
Ser Val Lys Val Met Trp Thr Val Glu Leu Cys Ala Gly His Phe Gln
65             70             75             80
Pro

```

<210> 5459

<211> 1468

<212> DNA

<213> Homo sapiens

<400> 5459

```

nncgccatgg cgtcaggcgc cgcggccccc gggagggtggc tcccacttta agaagtgaag
60
ttttgcgccc cteccctccc ctgccacct cctgcagcct cctgcgcccc gccgagctgg
120
cggatggagc tgcgcagcgg gagcgtgggc agccaggcgg tggcgcgagg gatggatggg
180
gacagccgag atggcggcgg cggaaggac gccaccgggt cggaggacta cgagaacctg
240
ccgactagcg cctccgtgtc caccacatg acagcaggag cgatggccgg gatcctggag
300
cactcgggtca tgtaccgggt ggactcgggt aagacacgaa tgcagagttt gagtccagat
360
cccaaagccc agtacacaag tatctacgga gccctcaaga aaatcatgca gaccgaaggc
420
ttctggaggc ccttgcgagg cgtcaacgtc atgatcatgg gtgcagggcc agcccatgcc
480
atgtattttg cctgctatga aaacatgaaa aggacttta atgacgtttt ccaccaccaa
540
ggaaacagcc acctagccaa cggatatttg aaagcgtttg tctggagtta gaaagttctc
600
ttcttcaaca cgccctccc cagggtgttc ctcctgtga ccagccgcc tgcacttcgg
660
cccgttgct cacgaataaa gaactcagag ttgtgtgtgc aatgcacacc cagacacacg
720
cacgcacaca cgcgcgcgcg cacacacatg cttttttctg ttccctccg ctttctgaag
780
cctggggaga aatcagtgac agagggtgtt tggttttatt gttatgtggg ttttctttg
840
tattttttt gtttgtttt tttttaaca ttcaaaagca attaatgac agacatagga
900
gaaaccctga atagaaacaa aacttttgaa tgctggattc aaaaaaaaaa aaaagttatc
960

```

tggacagctt ctttgagact atttaaaaac tggtagaaca ggtctctaca acgccaagat  
 1020  
 ctaactaagc tttaaaaggt caagaagttt tatggctgac aaaggactcg cgcaacgcag  
 1080  
 aaggccttcc ccaccttaag ctcccgggga tctgggaatt ttacccccat tctcttctgt  
 1140  
 ttgtctgagt ctcatctctc tgcaagcaag ggctgaaatc attttgtttg ggatagctgg  
 1200  
 gagtatggcc acctgctcc acgatgcggg aatgaatcca gcagaaggta atgtttcatg  
 1260  
 gtcccaggga ggggcagtag gggatgtgca aaggggcaca aaaaaatggg tgtgggagag  
 1320  
 tggagaggac tgaaggtggg cagacggctc ctagtctcca gtcagagcag acaggagaat  
 1380  
 tgaatttttt actacgttat caaaggcctc aagaaaggac gtgaacataa gagtttttgg  
 1440  
 tattcctgtg ctccgagcta cttcaaag  
 1468

<210> 5460

<211> 155

<212> PRT

<213> Homo sapiens

<400> 5460

Met	Glu	Leu	Arg	Ser	Gly	Ser	Val	Gly	Ser	Gln	Ala	Val	Ala	Arg	Arg
1				5				10						15	
Met	Asp	Gly	Asp	Ser	Arg	Asp	Gly	Gly	Gly	Lys	Asp	Ala	Thr	Gly	
			20					25					30		
Ser	Glu	Asp	Tyr	Glu	Asn	Leu	Pro	Thr	Ser	Ala	Ser	Val	Ser	Thr	His
			35				40						45		
Met	Thr	Ala	Gly	Ala	Met	Ala	Gly	Ile	Leu	Glu	His	Ser	Val	Met	Tyr
			50				55						60		
Pro	Val	Asp	Ser	Val	Lys	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro
							70				75			80	
Lys	Ala	Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Gln
														95	
Thr	Glu	Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met
														110	
Gly	Ala	Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met
														125	
Lys	Arg	Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu
														140	
Ala	Asn	Gly	Ile	Leu	Lys	Ala	Phe	Val	Trp	Ser					
														155	

<210> 5461

<211> 1725

<212> DNA

<213> Homo sapiens

<400> 5461

nnagtcgcgc ccgcagggtg tgcttgtctg cagagtcacg acctctttcc gcttgccct  
 60

catccagctt cagatttctt ccatcaaatt agataacgtc actcgcgctt gtagcttcat  
120  
ccgggaggca gcaacgcaag gagccaaaat agtttctttg ccggaatgct ttaattctcc  
180  
atatggagcg aaatattttc ctgaatatgc agagaaaatt cctggtgaat ccacacagaa  
240  
gctttctgaa gtagcaaagg aatgcagcat atatctcatt ggaggtaact tctacccac  
300  
aaggctctat cctgaagag gatgctgga aattatataa cacctgtgct gtgtttgggc  
360  
ctgatggaac ttactagca aagtatagaa agatccatct gtttgacatt gatgttctg  
420  
gaaaaattac atttcaagaa tctaaaacat tgagtccggg tgatagtctc tccacattg  
480  
atactcgtat gtaccagata agtttgccctc tttagcaatc tcagtagaag acaatcaggt  
540  
atattttct tttttgtctc tctccgattt cttcacataa cctaactgaa agaccataag  
600  
tgagaaaggc agagaatcat cacagatctg gaaagttcgg gcttatttga gaactaagga  
660  
tttgacacga ttttgccctt tgatttgatt gtagcttctt gttacggctt ccagagtata  
720  
cctattaggc tacagttgag tacctcccat ctagataata agcattcaat tagaatgaat  
780  
ttctcatctt tactccgctg atgtaaatga tgtctttatg agatgaagtc caagtaggaa  
840  
tgagcttgta aattatctct gtctcaggt cctgtgttaa tttatccctg tcagtgtttt  
900  
gtgatcatta tgtcatggag gatttcccct gccacacat gctgtaggga gttactttt  
960  
catttgtgca ttttctgttt ggaaacagct tactgcagag tgggtctggg catctgctac  
1020  
gacatgcggt ttgcagagct tgcacaaatc tacgcacaga gaggctgcca gctgttggt  
1080  
tatccaggag cttttaatct gaccactgga ccagccatt gggagttact tcagcgaagc  
1140  
cgggctgttg ataatcaggt gtatgtggcc acagcctctc ctgcccggga tgacaaagcc  
1200  
tcctatgttg cctggggaca cagcacctg gtgaaccctt ggggggaggt tctagccaaa  
1260  
gctggcacag aagaagcaat cgtgtattca gacatagacc tgaagaagct ggctgaaata  
1320  
cgccagcaaa tccccgtttt tagacagaag cgatcagacc tctatgctgt ggagatgaaa  
1380  
aagccctaaa gtttatgttt ctaatgtgtc acagaatagg acgatatgat tctacaacat  
1440  
aatcaactcc ctattaaatt ctttaatgaa gatTTTTTTT ttaattcggc cttgtccttc  
1500  
ctaggttctc tattgagatg agaaagctc attatgctga cttttccac gccacattaa  
1560  
atagttaaaa aggatgcagc ctggagccag agagcagaaa gctgggctgg ttctgaagct  
1620  
tcttcatac ttaagttgcc tccaagcagt ttgtgaaagt atcagatcct ggtatcctgg  
1680

tgattgattc acctaataata aatatatttg tgccatgaac ctctt  
1725

<210> 5462

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5462

Met	Ser	Trp	Arg	Ile	Ser	Pro	Ala	Thr	Pro	Cys	Cys	Arg	Glu	Leu	Thr
1				5					10					15	
Phe	His	Leu	Cys	Ile	Phe	Cys	Leu	Glu	Thr	Ala	Tyr	Cys	Arg	Val	Gly
			20					25					30		
Leu	Gly	Ile	Cys	Tyr	Asp	Met	Arg	Phe	Ala	Glu	Leu	Ala	Gln	Ile	Tyr
		35					40					45			
Ala	Gln	Arg	Gly	Cys	Gln	Leu	Leu	Val	Tyr	Pro	Gly	Ala	Phe	Asn	Leu
	50					55					60				
Thr	Thr	Gly	Pro	Ala	His	Trp	Glu	Leu	Leu	Gln	Arg	Ser	Arg	Ala	Val
65					70					75				80	
Asp	Asn	Gln	Val	Tyr	Val	Ala	Thr	Ala	Ser	Pro	Ala	Arg	Asp	Asp	Lys
			85						90				95		
Ala	Ser	Tyr	Val	Ala	Trp	Gly	His	Ser	Thr	Val	Val	Asn	Pro	Trp	Gly
			100					105					110		
Glu	Val	Leu	Ala	Lys	Ala	Gly	Thr	Glu	Glu	Ala	Ile	Val	Tyr	Ser	Asp
		115					120					125			
Ile	Asp	Leu	Lys	Lys	Leu	Ala	Glu	Ile	Arg	Gln	Gln	Ile	Pro	Val	Phe
	130					135					140				
Arg	Gln	Lys	Arg	Ser	Asp	Leu	Tyr	Ala	Val	Glu	Met	Lys	Lys	Pro	
145					150						155				

<210> 5463

<211> 792

<212> DNA

<213> Homo sapiens

<400> 5463

nnnttttttt ttttttaaag cctggattgt aaccagattt tcttttttcc cccttctcag  
60  
ctgtagatat gatattcct ttcaggggcc cagcttaagg gcaaagtgag ttaatgtgta  
120  
gacaaaggcg agggacaaga gagagttaac atctagacag tggaaaaagc catgggtgtg  
180  
ggtttctggg aaccaccaac acttgcaggt ttagcttttt cccagggttg actacaagaa  
240  
agaaaacat gtttttgcaa gattaaaatg tggttgagtg tgcctaaatt aaccatcccc  
300  
atttttatca tatttccacc atcacttcag ggttttaaga gtcagtgtc acctgggcg  
360  
agctgtagt acattttgct tcttagaaag ctaagtctg ggttccgtct gatttttagt  
420  
tccaggaact tctgagaac acccgatcgc agagggtaat tttctggagt ttgttttgca  
480  
gggatagctg ggagtatgc caccctgtc cagcatgcg taatgaatcc agcagaagt  
540

gtgaagcagc gcttgcagat gtacaactcg cagcaccggt cagcaatcag ctgcatccgg  
 600  
 acggtgtgga ggaccgaggg gttggggggc ttctaccgga gctacaccac gcagctgacc  
 660  
 atgaacatcc ccttcagtc catccacttc atcacctatg agttcctgca ggagcaggtc  
 720  
 aacccccacc ggacctacaa ccgcagtc caccatcatct caggcgggct ggccggggcc  
 780  
 ctcgccgagg cc  
 792

<210> 5464

<211> 111

<212> PRT

<213> Homo sapiens

<400> 5464

Phe	Ser	Gly	Val	Cys	Phe	Ala	Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu
1				5				10					15		
Leu	His	Asp	Ala	Val	Met	Asn	Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu
		20					25					30			
Gln	Met	Tyr	Asn	Ser	Gln	His	Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr
	35					40					45				
Val	Trp	Arg	Thr	Glu	Gly	Leu	Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr
50					55					60					
Gln	Leu	Thr	Met	Asn	Ile	Pro	Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr
65				70					75					80	
Glu	Phe	Leu	Gln	Glu	Gln	Val	Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln
			85				90						95		
Ser	His	Ile	Ile	Ser	Gly	Gly	Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	
			100				105						110		

<210> 5465

<211> 497

<212> DNA

<213> Homo sapiens

<400> 5465

tttgacggtc ttcaggttta tttcttaaat caattaggaa ataaaaccac agtgcccagg  
 60  
 aaagttcaca tgagacgcca cgggtgtctct tgccatggcc ccaccactcc agggggccagg  
 120  
 ggggtgctgct ggaggaggga cagacggaca ggccgacctg gtggccggcc ccagaaaggc  
 180  
 tggcgatgat gttcgagatg agccaccagc gaagccagta gggatgtctg ggccgtcctg  
 240  
 gtgggattgt ctgggacatc gccaccaaca cgggtgcaga gccatcagtg gggacatcgg  
 300  
 agggggccacc accaggtggg gtatattcaa caggctagaa ccctgaggc ttgagaggcc  
 360  
 aacccccggc aggagacctc cctgacccc tctgtgcct ctctgtggg accctccagt  
 420  
 agacacacca gatgaggaca cccaggaggc ctctcccag gacaggaggc agctgcctgg  
 480

gcagccacgc agtgcac

497

&lt;210&gt; 5466

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5466

Met Ala Pro Pro Leu Gln Gly Pro Gly Gly Ala Ala Gly Gly Arg Thr  
 1 5 10 15  
 Asp Gly Gln Ala Ala Trp Val Ala Gly Pro Arg Lys Ala Gly Val Asp  
 20 25 30  
 Val Arg Asp Glu Pro Pro Ala Lys Pro Val Gly Met Ser Gly Pro Ser  
 35 40 45  
 Trp Trp Asp Cys Leu Gly His Arg His Gln His Gly Val Arg Ala Ile  
 50 55 60  
 Ser Gly Asp Ile Gly Gly Ala Thr Thr Arg Trp Gly Ile Phe Asn Arg  
 65 70 75 80  
 Leu Glu Pro Leu Arg Leu Glu Arg Pro Thr Pro Gly Arg Arg Pro Pro  
 85 90 95  
 Leu Thr Pro Leu Leu Pro Leu Leu Trp Asp Pro Pro Val Asp Thr Pro  
 100 105 110  
 Asp Glu Asp Thr Gln Glu Ala Ser Ser Gln Asp Arg Arg Gln Leu Pro  
 115 120 125  
 Gly Gln Pro Arg Ser Ala  
 130

&lt;210&gt; 5467

&lt;211&gt; 1329

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5467

gtcgaatatc catgcagcgc cgccgcccgc ctggagtgcg ggaagcccag tggaaggggg  
 60  
 tcccggggagc cggtgcgat ggacgcgcgc ttggaaccct tcccggccga caggctgttc  
 120  
 cccgatcca gcttctgga cttgggggat ctgaacgagt cggacttcct caacaatgcg  
 180  
 cactttctcg agcacctgga ccactttacg gagaacatgg aggacttctc caatgacctg  
 240  
 ttccagcagct tctttgatga cctgtgctg gatgagaaga gccctctatt ggacatggaa  
 300  
 ctggactccc ctacgccagg catccaggcg gagcacagct actccctgag cggcgactca  
 360  
 gcgccccaga gcccccttgt gcccatcaag atggaggaca ccaccaaga tgcagagcat  
 420  
 ggagcatggg cgctgggaca caaactgtgc tccatcatgg tgaagcagga gcagagcccc  
 480  
 gagctgcccg tggacctct ggctgcccc tcggccatgg ctgccgcggc cgccatggcc  
 540  
 accaccccgc tgctgggct cagccccttg tccaggctgc ccacccccca ccaggccccg  
 600

ggagagatga ctcagctgcc agtgatcaaa gcagagcctc tggagggtgaa ccagttcctc  
 660  
 aaagtgcacac cggaggacct ggtgcagatg cctccgacgc cccccagcag ccatggcagt  
 720  
 gacagcgacg gctcccagag tccccgctct ctgccccctt ccagccctgt caggcccatg  
 780  
 gcgcgctcct ccacggccat ctccagctcc ccaactctca cggctcctca taaattacag  
 840  
 gggacatcag gccctctggt cctgacagag gaggagaaga ggaccctgat tgctgagggc  
 900  
 tatcccatcc ccaccaaact cccctcacc aaatcagagg agaaggcctt gaagaaaatt  
 960  
 cggaggaaga tcaagaataa gatttctgct caggaaagta ggagaaagaa gaaagaatac  
 1020  
 atggacagcc tggagaaaaa agtggagtct tgttcaactg agaacttgga gcttcggaag  
 1080  
 aaggtagaga ccctggagaa tgccaacagc ttctccagcg ggatccagcc actcctctgt  
 1140  
 tccctgattg gcctggagaa tcccacctga cccccaccc caccctctg tctctggctg  
 1200  
 gggttccttt ctggcccaaa gtaggtccaa gccctttag ttatttcgcc acctgctgta  
 1260  
 cattgtggga actgcaaccc ctacgtgccc gtttgggtgg agagagatta aacatttgcc  
 1320  
 caccaaaaa  
 1329

&lt;210&gt; 5468

&lt;211&gt; 363

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5468

Met	Asp	Ala	Val	Leu	Glu	Pro	Phe	Pro	Ala	Asp	Arg	Leu	Phe	Pro	Gly
1			5					10						15	
Ser	Ser	Phe	Leu	Asp	Leu	Gly	Asp	Leu	Asn	Glu	Ser	Asp	Phe	Leu	Asn
		20					25					30			
Asn	Ala	His	Phe	Pro	Glu	His	Leu	Asp	His	Phe	Thr	Glu	Asn	Met	Glu
		35				40						45			
Asp	Phe	Ser	Asn	Asp	Leu	Phe	Ser	Ser	Phe	Phe	Asp	Asp	Pro	Val	Leu
	50					55					60				
Asp	Glu	Lys	Ser	Pro	Leu	Leu	Asp	Met	Glu	Leu	Asp	Ser	Pro	Thr	Pro
	65				70					75			80		
Gly	Ile	Gln	Ala	Glu	His	Ser	Tyr	Ser	Leu	Ser	Gly	Asp	Ser	Ala	Pro
		85						90					95		
Gln	Ser	Pro	Leu	Val	Pro	Ile	Lys	Met	Glu	Asp	Thr	Thr	Gln	Asp	Ala
		100					105						110		
Glu	His	Gly	Ala	Trp	Ala	Leu	Gly	His	Lys	Leu	Cys	Ser	Ile	Met	Val
	115						120				125				
Lys	Gln	Glu	Gln	Ser	Pro	Glu	Leu	Pro	Val	Asp	Pro	Leu	Ala	Ala	Pro
	130					135					140				
Ser	Ala	Met	Ala	Ala	Ala	Ala	Ala	Met	Ala	Thr	Thr	Pro	Leu	Leu	Gly
	145				150				155				160		
Leu	Ser	Pro	Leu	Ser	Arg	Leu	Pro	Ile	Pro	His	Gln	Ala	Pro	Gly	Glu



```
<210> 5469
<211> 1292
<212> DNA
<213> Homo sapiens
```

```

<400> 5469
nnccgcgcccg cgtcgacgga aggggaggac gtgggatggt ggcgagctg gctgcagcag
60
agctaccaag cagtcaaaga gaagtcctct gaagccttgg agtttatgaa gcgggacctg
120
acggagttta cccagggtgt gcagcatgac acggcctgta ccatcgcagc cacggccagc
180
gtggtcaagg agaagctggc tacggaaggc tcctcaggag caacagagaa gatgaagaaa
240
gggttatctg acttcctagg ggtgatctca gacaccttg ccccttcgcc agacaaaacc
300
atcgactgcg atgtcatcac cctgatgggc acaccgtctg gcacagctga gccctatgat
360
ggcaccaagg ctgcctcta tagcctgcag tcggaccag caacctactg taatgaacca
420
gatgggcccc cggaattgtt tgacgcctgg ctttccagt tctgcttga ggagaagaag
480
ggggagatct cagagctcct tgtaggcagc ccctccatcc gggccctcta caccaagatg
540
gttccagcag ctgtttccca ttcagaattc tggcatcggt atttctataa agtccatcag
600
ttagagcagg agcaggcccc gagggacgcc ctgaagcagc gggcggaaca gagcatctct
660

```

gaagagcccc gctgggagga ggaggaagag gagctcatgg gcatttcacc catatctcca  
 720  
 aaagaggcaa aggttcctgt ggccaaaatt tctacattcc ctgaaggaga acctggcccc  
 780  
 cagagccctt gtgaagagaa tctggtgact tcagttgagc cccagcaga ggtgactcca  
 840  
 tcagagagca gtgagagcat ctccctcgtg acacagatcg ccaaccggc cactgcacct  
 900  
 gaggcacgag tgctacccaa ggacctgtcc caaaagctgc tagaggcatc cttggaggaa  
 960  
 cagggccttg ctgtggatgt gggtgagact ggacctcac cccctattca ctccaagccc  
 1020  
 ctaacgcctg ctggccacac cggcgcccca gagcccagc ctccagccag agtagagact  
 1080  
 ctgagggagg aggcgcccac agacttacgg gtgtttgagc tgaactcgga tagtggaag  
 1140  
 tctacaccct ccaacaatgg aaagaaaggc tcaagcacgg acatcagtga ggactgggag  
 1200  
 aaagactttg acttgacat gactgaagag gaggtgcaga tggcactttc caaagtggat  
 1260  
 gcctccgggg agctgaagat gtagaggggg aa  
 1292

&lt;210&gt; 5470

&lt;211&gt; 427

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5470

Xaa	Ala	Ala	Ala	Ser	Thr	Glu	Gly	Glu	Asp	Val	Gly	Trp	Trp	Arg	Ser
1				5					10					15	
Trp	Leu	Gln	Gln	Ser	Tyr	Gln	Ala	Val	Lys	Glu	Lys	Ser	Ser	Glu	Ala
		20						25					30		
Leu	Glu	Phe	Met	Lys	Arg	Asp	Leu	Thr	Glu	Phe	Thr	Gln	Val	Val	Gln
		35				40					45				
His	Asp	Thr	Ala	Cys	Thr	Ile	Ala	Ala	Thr	Ala	Ser	Val	Val	Lys	Glu
	50				55				60						
Lys	Leu	Ala	Thr	Glu	Gly	Ser	Ser	Gly	Ala	Thr	Glu	Lys	Met	Lys	Lys
65				70				75						80	
Gly	Leu	Ser	Asp	Phe	Leu	Gly	Val	Ile	Ser	Asp	Thr	Phe	Ala	Pro	Ser
		85					90						95		
Pro	Asp	Lys	Thr	Ile	Asp	Cys	Asp	Val	Ile	Thr	Leu	Met	Gly	Thr	Pro
		100					105						110		
Ser	Gly	Thr	Ala	Glu	Pro	Tyr	Asp	Gly	Thr	Lys	Ala	Arg	Leu	Tyr	Ser
	115					120						125			
Leu	Gln	Ser	Asp	Pro	Ala	Thr	Tyr	Cys	Asn	Glu	Pro	Asp	Gly	Pro	Pro
	130				135					140					
Glu	Leu	Phe	Asp	Ala	Trp	Leu	Ser	Gln	Phe	Cys	Leu	Glu	Glu	Lys	Lys
145				150					155					160	
Gly	Glu	Ile	Ser	Glu	Leu	Leu	Val	Gly	Ser	Pro	Ser	Ile	Arg	Ala	Leu
		165					170						175		
Tyr	Thr	Lys	Met	Val	Pro	Ala	Ala	Val	Ser	His	Ser	Glu	Phe	Trp	His
		180					185					190			
Arg	Tyr	Phe	Tyr	Lys	Val	His	Gln	Leu	Glu	Gln	Glu	Gln	Ala	Arg	Arg

195 200 205  
 Asp Ala Leu Lys Gln Arg Ala Glu Gln Ser Ile Ser Glu Glu Pro Gly  
 210 215 220  
 Trp Glu Glu Glu Glu Glu Glu Leu Met Gly Ile Ser Pro Ile Ser Pro  
 225 230 235 240  
 Lys Glu Ala Lys Val Pro Val Ala Lys Ile Ser Thr Phe Pro Glu Gly  
 245 250 255  
 Glu Pro Gly Pro Gln Ser Pro Cys Glu Glu Asn Leu Val Thr Ser Val  
 260 265 270  
 Glu Pro Pro Ala Glu Val Thr Pro Ser Glu Ser Ser Glu Ser Ile Ser  
 275 280 285  
 Leu Val Thr Gln Ile Ala Asn Pro Ala Thr Ala Pro Glu Ala Arg Val  
 290 295 300  
 Leu Pro Lys Asp Leu Ser Gln Lys Leu Leu Glu Ala Ser Leu Glu Glu  
 305 310 315 320  
 Gln Gly Leu Ala Val Asp Val Gly Glu Thr Gly Pro Ser Pro Pro Ile  
 325 330 335  
 His Ser Lys Pro Leu Thr Pro Ala Gly His Thr Gly Gly Pro Glu Pro  
 340 345 350  
 Arg Pro Pro Ala Arg Val Glu Thr Leu Arg Glu Glu Ala Pro Thr Asp  
 355 360 365  
 Leu Arg Val Phe Glu Leu Asn Ser Asp Ser Gly Lys Ser Thr Pro Ser  
 370 375 380  
 Asn Asn Gly Lys Lys Gly Ser Ser Thr Asp Ile Ser Glu Asp Trp Glu  
 385 390 395 400  
 Lys Asp Phe Asp Leu Asp Met Thr Glu Glu Glu Val Gln Met Ala Leu  
 405 410 415  
 Ser Lys Val Asp Ala Ser Gly Glu Leu Lys Met  
 420 425

&lt;210&gt; 5471

&lt;211&gt; 534

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5471

cggccgcccc gcgggggccc agaaatagga ccgtcctggc agaggctgca gccgacccag  
 60  
 ctggccccac tacgcggggc ccagagccag ggtgggggat gcagagaccg ggcgtgcggg  
 120  
 ttgccagggtg tggcgccacat gtgtgcccgt gggcagagta cagagacaca agcttgtgtg  
 180  
 gacacgaatg tgtagctatg tgcgagtga cacggagtgg tgagtgcagg gacccaggc  
 240  
 cggcctgcgt cgggtgcgag ggcataatagg ggcgtgcacg cagtcttggg ggtgtgtgca  
 300  
 cagagccccc ggcacccgag tgtgtgcaaa gacacaggaa cccgtctgcg tggcgctgtg  
 360  
 tgtgcaaccc aaggaggtgg gcgcttgga tccaaagtgt gcgcttatcc ggatgtggat  
 420  
 gtggggggcag ccggggacag ggctgggtgt gcgtgactcg ggtgtgccgg gacccacaga  
 480  
 gcatatgtgt ccatgcctgg tgctgtgact catgtccctg ggggtgggac gcgt  
 534

<210> 5472  
 <211> 161  
 <212> PRT  
 <213> Homo sapiens

<400> 5472

```

Met Leu Cys Gly Ser Arg His Thr Arg Val Thr His Thr Gln Pro Cys
 1           5           10           15
Pro Arg Leu Pro Pro His Pro His Pro Asp Lys Arg Thr Leu Trp Ser
      20           25           30
Pro Ser Ala His Leu Leu Gly Leu His Thr Gln Arg His Ala Asp Gly
      35           40           45
Phe Leu Cys Leu Cys Thr His Ala Gly Ala Gly Gly Ser Val His Thr
      50           55           60
Pro Pro Arg Leu Arg Ala Arg Pro Tyr Met Pro Cys Ala Pro Thr Gln
      65           70           75           80
Ala Gly Leu Gly Ser Leu His Ser Pro Leu Arg Val His Ser His Ile
      85           90           95
Ala Thr His Ser Cys Pro His Lys Leu Val Ser Leu Tyr Ser Ala His
      100          105          110
Gly His Thr Cys Ala Pro His Leu Ala Thr Arg Thr Pro Gly Leu Cys
      115          120          125
Ile Pro His Pro Gly Ser Gly Pro Arg Val Val Gly Pro Ala Gly Ser
      130          135          140
Ala Ala Ala Ser Ala Arg Thr Val Leu Phe Leu Arg Pro Arg Gly Ala
      145          150          155          160
Ala
  
```

<210> 5473  
 <211> 691  
 <212> DNA  
 <213> Homo sapiens

<400> 5473

```

gcgaccagca gcgctggtgg ccatgctctt ggacactacg gcctggcggg cagccctcgc
60
cgctgccgcg ccccgcgccc ccaggaggcc gcacctgcg ccaggggccg gagacagcaa
120
catcttcttg ggctgcagg agacctgaca gatgccaaaa caaaggaaca gttgggatcc
180
aggcagcatg aggtagaatg gcaaacctac cagggtattc tgaagaagac aagagtcatt
240
gaaaaaacca agtggctgga tatcaaagga aatcatgaaa aagatggagg agctcttatt
300
actggccaag gaaagcagtc ggagcaacca tacaatttgg tttggacact ttacaacatc
360
cactattctt tctccatcac caggaatccg gtcaataatg agttcggcta tagcttattt
420
gtgtggacat ctccatacac ttggtggact gatgcctgtt ttgcacactc gtcacttcca
480
gggcactttg gaacttgagg tgggagactg gaaggataat aggaggtacc ggatttttgc
540
  
```

ttttgatcac gacctcttta gctttgcaga ttgatcttt gggaagtggc ctgtggttct  
 600  
 tatcaccaat cctaaatcac tcctttatag ttgtggtgaa catgaaccac tagaaagact  
 660  
 tcttcactca acccacatta gattggtaac a  
 691

<210> 5474

<211> 139

<212> PRT

<213> Homo sapiens

<400> 5474

Met	Lys	Lys	Met	Glu	Leu	Leu	Leu	Leu	Ala	Lys	Glu	Ser	Ser	Arg
1			5					10					15	
Ser	Asn	His	Thr	Ile	Trp	Phe	Gly	His	Phe	Thr	Thr	Ser	Thr	Ile
			20				25					30		Leu
Ser	Pro	Ser	Pro	Gly	Ile	Arg	Ser	Ile	Met	Ser	Ser	Ala	Ile	Tyr
		35				40					45			
Leu	Cys	Gly	His	Leu	His	Thr	Leu	Gly	Gly	Leu	Met	Pro	Val	Leu
	50					55				60				His
Thr	Arg	His	Phe	Gln	Gly	Thr	Leu	Glu	Leu	Glu	Val	Gly	Asp	Trp
65					70				75				80	Lys
Asp	Asn	Arg	Arg	Tyr	Arg	Ile	Phe	Ala	Phe	Asp	His	Asp	Leu	Phe
			85					90					95	Ser
Phe	Ala	Asp	Leu	Ile	Phe	Gly	Lys	Trp	Pro	Val	Val	Leu	Ile	Thr
		100					105					110		Asn
Pro	Lys	Ser	Leu	Leu	Tyr	Ser	Cys	Gly	Glu	His	Glu	Pro	Leu	Glu
		115					120					125		Arg
Leu	Leu	His	Ser	Thr	His	Ile	Arg	Leu	Val	Thr				
		130					135							

<210> 5475

<211> 628

<212> DNA

<213> Homo sapiens

<400> 5475

ggcacacacg aaacagcctt cctgggaccc aaggacctgt tcccctacga caaatgtaa  
 60  
 gacaagtacg ggaagcccaa caagaggaaa ggcttcaatg aagggtgtg ggagatccag  
 120  
 aacaaccccc acgccagcta cagcgccctt ccgccagtga gctectccga cagcgaggcc  
 180  
 cccgaggcca accccgccga cggcagtgac gctgacgagg acgatgagga ccgggggggc  
 240  
 atggccgtca cagcggtaac cgccacagct gccagcgaca ggatggagag cgactcagac  
 300  
 tcagacaaga gtacgcacaa cagtggcctg aagaggaaga cgcctgcgct aaagatgtcg  
 360  
 gtctcgaaac gagcccgaaa ggcctccagc gacctggatc aggccagcgt gtccccatcc  
 420  
 gaagaggaga actcggaag ctcatctgag tcggagaaga ccagcgacca ggacttcaca  
 480

cctgagaaga aagcagcggg cggggcgcca cggagggggc ctctgggggg acggaaaaaa  
 540  
 aagaaggcgc cgtcagcctc cgactccgac tccaaggccg attcggacgg ggccaagcct  
 600  
 gagccggtgg ccatggcgcg gtcggcgt  
 628

<210> 5476  
 <211> 209  
 <212> PRT  
 <213> Homo sapiens

<400> 5476  
 Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro Tyr  
 1 5 10 15  
 Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys Gly Phe  
 20 25 30  
 Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala Ser Tyr Ser  
 35 40 45  
 Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala Pro Glu Ala Asn  
 50 55 60  
 Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp Glu Asp Arg Gly Val  
 65 70 75 80  
 Met Ala Val Thr Ala Val Thr Ala Thr Ala Ala Ser Asp Arg Met Glu  
 85 90 95  
 Ser Asp Ser Asp Ser Asp Lys Ser Ser Asp Asn Ser Gly Leu Lys Arg  
 100 105 110  
 Lys Thr Pro Ala Leu Lys Met Ser Val Ser Lys Arg Ala Arg Lys Ala  
 115 120 125  
 Ser Ser Asp Leu Asp Gln Ala Ser Val Ser Pro Ser Glu Glu Glu Asn  
 130 135 140  
 Ser Glu Ser Ser Ser Glu Ser Glu Lys Thr Ser Asp Gln Asp Phe Thr  
 145 150 155 160  
 Pro Glu Lys Lys Ala Ala Val Arg Ala Pro Arg Arg Gly Pro Leu Gly  
 165 170 175  
 Gly Arg Lys Lys Lys Ala Pro Ser Ala Ser Asp Ser Asp Ser Lys  
 180 185 190  
 Ala Asp Ser Asp Gly Ala Lys Pro Glu Pro Val Ala Met Ala Arg Ser  
 195 200 205  
 Ala

<210> 5477  
 <211> 727  
 <212> DNA  
 <213> Homo sapiens

<400> 5477  
 ttttttggtta gtgtttcctt tattataaag cactgaaata agttaataa acaggtggga  
 60  
 ggctgggcag tccccagcc ggtttgtcca cagcccctgg gggcagtgga ggtgaataca  
 120  
 gggcccttct cactgagctc gtgaagtgcc tcagtcaagg caaggtcccc tggccatat  
 180

gggccccccc gcccatgggg ttgggctggt ccttatagtg cctacgttag tctgtgtgga  
 240  
 gcccttgccc agcgggggag aaaaagggtg cttctgtgcc gtctgtataa aacatggccc  
 300  
 ctcacctgtc ggccccccac acagctggca ggctgggctg gcctctcacc cctggcctcc  
 360  
 cctggacccc tggctggctc ctcaacttca ctctccgcac ttagtgcccg gccgccccca  
 420  
 gactcatcgt cgctcagccc ataggggaagc ccaggcctgg cccccagaga gtctccttcc  
 480  
 gagtctctct cgaagcccat gagctgggtc ctggtgcgt cgccttcctc ctcttctct  
 540  
 tctctctcaa actccagatc ctggcctagt agcaaatac tctccaatac cagggccccg  
 600  
 ggtccttcgt cgaggagtc ttcagtatcc actttgaccc cctcgcatth caggggctgc  
 660  
 ggggtggcttt gcttccttcg gggcatcgtg accggctcca gcccgacgcg cctccggcct  
 720  
 gcggccg  
 727

&lt;210&gt; 5478

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5478

Ser	Ala	Ser	Val	Lys	Ala	Arg	Ser	Pro	Gly	Pro	Tyr	Gly	Pro	Pro	Arg
1				5					10					15	
Pro	Trp	Gly	Trp	Ala	Gly	Pro	Tyr	Ser	Ala	Tyr	Val	Ser	Leu	Cys	Gly
		20						25					30		
Ala	Pro	Gly	Gln	Arg	Gly	Arg	Lys	Arg	Trp	Leu	Leu	Val	Arg	Leu	Tyr
		35					40					45			
Lys	Thr	Trp	Pro	Leu	Thr	Cys	Arg	Pro	Pro	Thr	Gln	Leu	Ala	Gly	Trp
	50					55				60					
Ala	Gly	Leu	Ser	Pro	Leu	Ala	Ser	Pro	Gly	Pro	Leu	Ala	Gly	Ser	Ser
65				70					75					80	
Thr	Ser	Leu	Ser	Ala	Leu	Ser	Ala	Arg	Pro	Pro	Pro	Asp	Ser	Ser	Ser
				85					90					95	
Leu	Ser	Pro													

&lt;210&gt; 5479

&lt;211&gt; 1386

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5479

gccggcacca cagaccgaga agaagccact cggctcttgg ctgagaagcg gccccaggcc  
 60  
 cgggagcagc gggagcgcca ggagcaggag cggaggctgc aggcagaaag ggacaagcga  
 120  
 atgcgagagg agcagctggc acgggaggcc gagggccggg cggagcggga ggaggaggcc  
 180

cggaggcggg aggagcagga ggcacgagag aaggcgcagg ccgagcagga ggagcaggag  
 240  
 cggctgcaga agcagaaaga ggaggccgaa gctcggctgc gggaagaggc ggagcggcag  
 300  
 cgtctggagc gggaaaagca ctccagcag caggagcaag agcggcaaga gcgcagaaaag  
 360  
 cgtctggagg agatcatgaa gaggactcgg aagtcagaag tttctgaaac caagcagaag  
 420  
 caggacagca aggaggccaa cgccaacggt tccagcccag agcctgtgaa agctgtggag  
 480  
 gctcgggtccc cagggtcgca gaaggaggct gtgcagaaag aggagcccat cccacaggag  
 540  
 cctcagtga gtctcccaag caaggagtgg ccagcgtccc tggatgaatgg cctgcagcct  
 600  
 ctcccagcac accaggagaa tggcttctcc accaacggac cctctgggga caagagtctg  
 660  
 agccgaacac cagagacact cctgcccttt gcagaggcag aagccttctt caagaaagct  
 720  
 gtggtgcagt ccccgaggt cacagaagtc ctttaagagg gtttgccttg gatccgggca  
 780  
 cagttgtgag ggctcctctg catcacctac caggatgtct ggaggagaaa aagacagaac  
 840  
 aaagatggaa gtggcctggg cccctggggg tgggtcctct ctgttgtttt taatctgcac  
 900  
 cttatagact gatgtctctt tggccggagc cagatctgcc cctcagtga ttcgtgtgct  
 960  
 cgcacgcgca gacatccctt ctccccata cacacatata cactcacagc ctctctggcc  
 1020  
 tcttcccttg gggaggggccc acctgtagta tttgccttga tttggtgggg tacagtggat  
 1080  
 gtgaatactg taaatagctt gtgctcagac tctctgcgt ggagaggggtg ggtgcaggag  
 1140  
 gcagaccctc cccccaaagc cccctgggga gatcttctc tctctattta actgtaactg  
 1200  
 agggggatcc caggtctggg gatgggggac accttgggccc acaggatact ggttgcttca  
 1260  
 ggggtaccca tgccccctgc cctcgcctgg aatcagtggt actgcatctg attaaatgtc  
 1320  
 tccagaaata aagaataatt ctgccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1380  
 aaaaaa  
 1386

&lt;210&gt; 5480

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5480

Ala	Gly	Thr	Thr	Asp	Arg	Glu	Glu	Ala	Thr	Arg	Leu	Leu	Ala	Glu	Lys
1				5				10					15		
Arg	Arg	Gln	Ala	Arg	Glu	Gln	Arg	Glu	Arg	Glu	Glu	Gln	Glu	Arg	Arg
		20					25					30			
Leu	Gln	Ala	Glu	Arg	Asp	Lys	Arg	Met	Arg	Glu	Glu	Gln	Leu	Ala	Arg



35 40 45  
 Glu Ala Glu Ala Arg Ala Glu Arg Glu Ala Glu Ala Arg Arg Arg Glu  
 50 55 60  
 Glu Gln Glu Ala Arg Glu Lys Ala Gln Ala Glu Gln Glu Glu Gln Glu  
 65 70 75 80  
 Arg Leu Gln Lys Gln Lys Glu Glu Ala Glu Ala Arg Ser Arg Glu Glu  
 85 90 95  
 Ala Glu Arg Gln Arg Leu Glu Arg Glu Lys His Phe Gln Gln Glu  
 100 105 110  
 Gln Glu Arg Gln Glu Arg Arg Lys Arg Leu Glu Glu Ile Met Lys Arg  
 115 120 125  
 Thr Arg Lys Ser Glu Val Ser Glu Thr Lys Gln Lys Gln Asp Ser Lys  
 130 135 140  
 Glu Ala Asn Ala Asn Gly Ser Ser Pro Glu Pro Val Lys Ala Val Glu  
 145 150 155 160  
 Ala Arg Ser Pro Gly Leu Gln Lys Glu Ala Val Gln Lys Glu Glu Pro  
 165 170 175  
 Ile Pro Gln Glu Pro Gln Trp Ser Leu Pro Ser Lys Glu Leu Pro Ala  
 180 185 190  
 Ser Leu Val Asn Gly Leu Gln Pro Leu Pro Ala His Gln Glu Asn Gly  
 195 200 205  
 Phe Ser Thr Asn Gly Pro Ser Gly Asp Lys Ser Leu Ser Arg Thr Pro  
 210 215 220  
 Glu Thr Leu Leu Pro Phe Ala Glu Ala Glu Ala Phe Leu Lys Lys Ala  
 225 230 235 240  
 Val Val Gln Ser Pro Gln Val Thr Glu Val Leu  
 245 250

&lt;210&gt; 5481

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5481

tgtccaatga ggagccagcg ccggattgct tcaggacaga ctattttctga gtctcggcgg  
 60  
 aaggcggagg gaaggccgtg gggatggcca atcaaagggg gcgactcagg tcggtgggga  
 120  
 ccggcagcca atcaggagag cgctcgctcc tgactcgacc ggcccacgct tcccgcaggt  
 180  
 ccctaaccg tgaggctgcc gcgcggcggt cactgcgcgg gggtagtggg cccagtggt  
 240  
 gcgtctctg gccgttcctt acactttgct tcaggctcca gtgcaggggc gtagtgggat  
 300  
 atggccaact cgggctgcaa ggacgtcacg ggtccagatg aggagagttt tctgtacttt  
 360  
 gcctacggca gcaacctgct gacagagagg atccacctcc gaaaccctc ggcggcggtc  
 420  
 ttctgtgtgg ccgcctgca ggattttaag cttgactttg gcaattccca aggcaaaaca  
 480  
 agtcaaactt ggcattggagg gatagccacc atttttcaga gtcttgggca tgaattgtgg  
 540  
 ggagtagtat ggaaaatgaa caaaagcaat ttaaattctc tggatgagca agaaggggtt  
 600

aaaagtggaa tgtatgttgt aatagaagtt aaagttgcaa ctcaagaagg aaaagaaata  
 660  
 acctgtcgaa gttatctgat gacaaattac gaaagtgtc ccccatcccc acagtataaa  
 720  
 aagattatgt gcatgggtgc aaaagaaaat gggttgccgc tggagtatca agagaagtta  
 780  
 aaagcaatag aaccaaata ctatacagga aaggtctcag aagaaattga agacatcatc  
 840  
 aaaaaggggg aaacacaaac tctttagaac ataacagaat atatctaagg gtattctatg  
 900  
 tgctaataata aaatattttt aacacttgag aacagggatc tgggggatct ccacgtttga  
 960  
 tccattttca gcagtgtctt gaaggagtat cttacttggg tgattccttg tttttagact  
 1020  
 ataaaaagaa actgggatag gagttagaca atttaaaagg ggtgtatgag ggcctgaaat  
 1080  
 atgtgacaaa tgaatgtgag tacccttctt gtgaacactg aaagctattc tcttgaattg  
 1140  
 atcttaagtg tctccttgct ctggtaaaag atagatttgt agctcacttg atgatgggtc  
 1200  
 tgggtgaattg ctctgctctg tctgagattt ttaaaaatca gcttaatgag agtaatctgc  
 1260  
 agacaattga taataacatt ttgaaaattg gaaagatggg atactgtttt tagaggaata  
 1320  
 aacgtatttg tggtttaaaa aaaaagagc aacttccttt gcactgtata ccccttttga  
 1380  
 ttattaggat ttatactat gtttatatgt tgcctattta ataaatcgct taaagttata  
 1440  
 tatcttgaat atctttccat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1500  
 aaaaaaaaaa aaa  
 1513

&lt;210&gt; 5482

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5482

Met Ala Asn Ser Gly Cys Lys Asp Val Thr Gly Pro Asp Glu Glu Ser  
 1 5 10 15  
 Phe Leu Tyr Phe Ala Tyr Gly Ser Asn Leu Leu Thr Glu Arg Ile His  
 20 25 30  
 Leu Arg Asn Pro Ser Ala Ala Phe Phe Cys Val Ala Arg Leu Gln Asp  
 35 40 45  
 Phe Lys Leu Asp Phe Gly Asn Ser Gln Gly Lys Thr Ser Gln Thr Trp  
 50 55 60  
 His Gly Gly Ile Ala Thr Ile Phe Gln Ser Pro Gly Asp Glu Leu Trp  
 65 70 75 80  
 Gly Val Val Trp Lys Met Asn Lys Ser Asn Leu Asn Ser Leu Asp Glu  
 85 90 95  
 Gln Glu Gly Val Lys Ser Gly Met Tyr Val Val Ile Glu Val Lys Val  
 100 105 110  
 Ala Thr Gln Glu Gly Lys Glu Ile Thr Cys Arg Ser Tyr Leu Met Thr

	115		120		125	
Asn	Tyr	Glu	Ser	Ala	Pro	Pro
					Ser	Pro
					Gln	Tyr
					Lys	Lys
					Ile	Ile
					Cys	
130				135		140
Met	Gly	Ala	Lys	Glu	Asn	Gly
					Leu	Pro
					Leu	Glu
					Tyr	Gln
					Glu	Lys
145				150		155
						160
Lys	Ala	Ile	Glu	Pro	Asn	Asp
					Tyr	Thr
					Gly	Lys
					Val	Ser
					Glu	Glu
					Ile	
				165		170
						175
Glu	Asp	Ile	Ile	Lys	Lys	Gly
					Glu	Thr
					Gln	Thr
					Leu	
				180		185

&lt;210&gt; 5483

&lt;211&gt; 1552

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5483

```

actttcctcg acagccactg tgaggtgaac agggactggc tccagcctct nttngacagg
60
gtcaaagagg actacacgcg ggtggtgtgc cctgtgatcg atatcattaa cctggacacc
120
ttcacctaca tcgagtctgc ctccgagctc agaggggggt ttgactggag cctccacttc
180
cagtgggagc agctctcccc agagcagaag gctcggcgcc tggacccac ggagcccatc
240
aggactccta tcatagctgg agggctcttc gtgatcgaca aagcttggtt tgattacctg
300
gggaaatatg atatggacat ggacatctgg ggtggggaga actttgaaat ctcttccga
360
gtgtggatgt gcgggggcag cctagagatc gtcccctgca gccgagtggg gcacgtcttc
420
cggaagaagc acccctacgt tttccctgat ggaaatgcca acacgtatat aaagaacacc
480
aagcggacag ctgaagtgtg gatggatgaa tacaagcaat actattacgc tgcccggcca
540
ttcgcctgg agaggccctt cggaatggt gagagcagat tggacctgag gaagaatctg
600
cgctgccaga gttcaagtg gtacctggag aatatctacc ctgaactcag catccccaag
660
gagttctcca tccagaaggg caatatccga cagagacaga agtgectgga atctcaaagg
720
cagaacaacc aagaaacccc aaacctaaag ttgagccct gtgccaaggt caaaggcgaa
780
gatgcaaagt cccaggtatg ggccttcaca tacaccaga agatcctcca ggaggagctg
840
tgctgtcag tcacacctt gtccctggc gccccagtgg ttcttgcct ttgcaagaat
900
ggagatgacc gacagcaatg gacaaaaact ggttcccaca tcgagcacat agcatccac
960
ctctgcctcg atacagatat gtccggtgat ggcaccgaga acggcaagga aatcgctgc
1020
aacccatgtg agtctcact catgagccag cactgggaca tggtagctc ttgaggacc
1080
ctgccagaag cagcaagggc catggggtg tgcttcctg gaccagaaca gactggaaac
1140

```

tgggcagcaa gcagcctgca accacctcag acatcctgga ctgggaggtg gaggcagagc  
 1200  
 ccccaggac aggagcaact gtctcagga ggacagagga aaacatcaca agccaatggg  
 1260  
 gctcaaagac aaatcccaca tgttctcaag gccgttaagt tccagtcctg gccagtcatt  
 1320  
 ccctgattgg tatctggaga cagaaacctt atgggaagtg tttattgttc cttttcctac  
 1380  
 aaaggaagca gtctctggag gccagaaaga aaagccttct ttttactag gccaggacta  
 1440  
 cattgagaga tgaagaatgg aggttggttc caaaagaaat aaagagaaac ttagaagttg  
 1500  
 tctctggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1552

<210> 5484

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5484

Thr	Phe	Leu	Asp	Ser	His	Cys	Glu	Val	Asn	Arg	Asp	Trp	Leu	Gln	Pro
1				5					10					15	
Leu	Xaa	Asp	Arg	Val	Lys	Glu	Asp	Tyr	Thr	Arg	Val	Val	Cys	Pro	Val
			20					25					30		
Ile	Asp	Ile	Ile	Asn	Leu	Asp	Thr	Phe	Thr	Tyr	Ile	Glu	Ser	Ala	Ser
	35						40					45			
Glu	Leu	Arg	Gly	Gly	Phe	Asp	Trp	Ser	Leu	His	Phe	Gln	Trp	Glu	Gln
	50					55					60				
Leu	Ser	Pro	Glu	Gln	Lys	Ala	Arg	Arg	Leu	Asp	Pro	Thr	Glu	Pro	Ile
	65				70					75				80	
Arg	Thr	Pro	Ile	Ile	Ala	Gly	Gly	Leu	Phe	Val	Ile	Asp	Lys	Ala	Trp
			85						90					95	
Phe	Asp	Tyr	Leu	Gly	Lys	Tyr	Asp	Met	Asp	Met	Asp	Ile	Trp	Gly	Gly
		100					105					110			
Glu	Asn	Phe	Glu	Ile	Ser	Phe	Arg	Val	Trp	Met	Cys	Gly	Gly	Ser	Leu
	115						120					125			
Glu	Ile	Val	Pro	Cys	Ser	Arg	Val	Gly	His	Val	Phe	Arg	Lys	Lys	His
	130					135					140				
Pro	Tyr	Val	Phe	Pro	Asp	Gly	Asn	Ala	Asn	Thr	Tyr	Ile	Lys	Asn	Thr
	145				150					155				160	
Lys	Arg	Thr	Ala	Glu	Val	Trp	Met	Asp	Glu	Tyr	Lys	Gln	Tyr	Tyr	Tyr
			165					170						175	
Ala	Ala	Arg	Pro	Phe	Ala	Leu	Glu	Arg	Pro	Phe	Gly	Asn	Val	Glu	Ser
			180					185					190		
Arg	Leu	Asp	Leu	Arg	Lys	Asn	Leu	Arg	Cys	Gln	Ser	Phe	Lys	Trp	Tyr
	195					200					205				
Leu	Glu	Asn	Ile	Tyr	Pro	Glu	Leu	Ser	Ile	Pro	Lys	Glu	Phe	Ser	Ile
	210					215					220				
Gln	Lys	Gly	Asn	Ile	Arg	Gln	Arg	Gln	Lys	Cys	Leu	Glu	Ser	Gln	Arg
	225				230					235				240	
Gln	Asn	Asn	Gln	Glu	Thr	Pro	Asn	Leu	Lys	Leu	Ser	Pro	Cys	Ala	Lys
			245					250						255	
Val	Lys	Gly	Glu	Asp	Ala	Lys	Ser	Gln	Val	Trp	Ala	Phe	Thr	Tyr	Thr

	260		265		270
Gln Lys Ile	Leu Gln Glu Glu Leu Cys Leu Ser Val Ile Thr Leu Phe				
	275		280		285
Pro Gly Ala	Pro Val Val Leu Val Leu Cys Lys Asn Gly Asp Asp Arg				
	290		295		300
Gln Gln Trp Thr Lys Thr Gly Ser His Ile Glu His Ile Ala Ser His					
305		310		315	320
Leu Cys Leu Asp Thr Asp Met Phe Gly Asp Gly Thr Glu Asn Gly Lys					
	325		330		335
Glu Ile Val Val Asn Pro Cys Glu Ser Ser Leu Met Ser Gln His Trp					
	340		345		350
Asp Met Val Ser Ser					
	355				

&lt;210&gt; 5485

&lt;211&gt; 1549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5485

nacgcgtgaa gggcgtagcg gatecgcgcg ggacagcgct actgcggcctt tggtcgcaca  
 60  
 gtgtaccgag aggagcacag cagatggagg gacagctcca ggacgaggtt gtggaattcg  
 120  
 ccgttcgaaa gcagggacta aaagcccccac ttcgtcttac gttccgaaag gaaggcgtct  
 180  
 gttgagcctt tctctcagtc gtgagggagg cgtcgacggc gtgcggaagt cctgagttga  
 240  
 ggcttcgagg atcctttccg gagaaagcgc aggcataaagc cgcaggtgaa gatgtccaac  
 300  
 tacgtgaacg acatgtggcc gggctcgccg caggagaagg attcgccctc gacctcgcg  
 360  
 tcgggcgagg ccagccggtt gtcgctcgcg tctaggagcc gctctttttc cagaagctct  
 420  
 cgggtccatt cccggtctc gagccggttt tcgtccagga gtcggaggag caagtccagg  
 480  
 tcccgttccc gaaggcgcca ccagcggaag tacaggcgct actcgcggtc atactcgcg  
 540  
 agccggtcgc gatcccgag ccgccgttac cgagagaggc gctacgggtt caccaggaga  
 600  
 tactaccggt ctcttcgag gtaccgggtc cgggtccgta gcaggtcgcg ctctcgggga  
 660  
 aggtcgtact gcggaagggc gtacgcgac gcgcggggac agcgctacta cggctttggt  
 720  
 cgcacagtgt acccgaggga gcacagcaga tggagggaca gatccaggac gaggtcgcg  
 780  
 agcagaacct cctttcgctt aagtgaataa gatcgaatgg agctgttaga aatagcaaaa  
 840  
 accaatgcag cgaaagctct aggaacaacc aacattgact tgccagctag tctcagaact  
 900  
 gttccttcag ccaaagaaac aagccgtgga ataggtgtat caagtaatgg tgcaaagcct  
 960  
 gaactgtcgg aaaaggtaac agaagatgga actcgaaatc ccaatgaaaa acctaccag  
 1020

caaagaagca tagcttttag ctctaataat tctgtagcaa agccaataca aaaatcagct  
 1080  
 aaagctgcca cagaagaggc atcttcaaga tcacaaaaa tagatcagaa aaaaagtcca  
 1140  
 tatggactgt ggatacctat ctaaaagaag aaaactgatg gctaagtttg catgaaaact  
 1200  
 gcactttatt gcaagttagt gtttctagca ttatcccatc cctttgagcc attcaggggt  
 1260  
 acttggtcat ttaaaaaacca acacaaaaag atgtaaatac ttaacactca aatattaaca  
 1320  
 ttttaggttt ctcttcgaga tatgagagat agcacagatg gaccaaaggt tatgcacagg  
 1380  
 tgggagtctt ttgtatatag ttgtaaatat tgtcttggtt atgtaaaaat gaaatttttt  
 1440  
 agacacagta attgaactgt attcctgttt tgtatattta ataaattttct tgttttcatt  
 1500  
 cttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaga  
 1549

&lt;210&gt; 5486

&lt;211&gt; 290

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5486

Met	Ser	Asn	Tyr	Val	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
		20						25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
		35				40						45			
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
		50				55					60				
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
		65			70				75					80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
			85					90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
		100						105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
		115				120						125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
		130				135						140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
					150					155				160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Asp	Arg	Met
			165					170						175	
Glu	Leu	Leu	Glu	Ile	Ala	Lys	Thr	Asn	Ala	Ala	Lys	Ala	Leu	Gly	Thr
		180						185					190		
Thr	Asn	Ile	Asp	Leu	Pro	Ala	Ser	Leu	Arg	Thr	Val	Pro	Ser	Ala	Lys
		195					200					205			
Glu	Thr	Ser	Arg	Gly	Ile	Gly	Val	Ser	Ser	Asn	Gly	Ala	Lys	Pro	Glu
		210				215					220				
Leu	Ser	Glu	Lys	Val	Thr	Glu	Asp	Gly	Thr	Arg	Asn	Pro	Asn	Glu	Lys

```
<210> 5487
<211> 1716
<212> DNA
<213> Homo sapiens
```

```

<400> 5487
acgccaccgg gtcggaggac tacgagaacc tgccgactag cgctccggtg tccacccaca
60
tgacagcagg agcgatggcc gggatcctgg agcactcggt catgtaccog gtggactcgg
120
tgaagagaca gggctcttgcc ttgtcgcta ggctggagtg cagtgttgag atcatagttt
180
actgcagcct cgaactcctg ggtacaagga atcctccctc ctacgacctc tgagtagctg
240
ggattacaga cacgaatgca gagtttgagt ccagatccca aagcccagta cacaagtatc
300
tacggagccc tcaagaaaat catgcggacc gaaggcttct ggaggccctt gcgaggcgctc
360
aacgtcatga tcatgggtgc agggccagcc catgccatgt attttgctg ctatgaaaa
420
atgaaaagga ctttaaata cgttttccac caccaaggaa acagccacct agccaacggg
480
atagctggga gtatggccac cctgctccac gatgcggtaa tgaatccagc agaagtggtg
540
aagcagcgct tgcagatgta caactcgag caccggtcag caatcagctg catccggacg
600
gtgtggagga ccgagggggt gggggccttc taccggagct acaccacgca gctgaccatg
660
aacatccctc tccagtccat ccacttcac acctatgagt tcttgaggga gcaggtcaac
720
ccccaccgga cctacaaccc gcagtcacc atcatctcag gcgggctggc cggggccctc
780
gccgcggcgg ccacgacccc cctggacgtc tgtaagacc ttctgaacac tcaggagaac
840
gtggccctct cgctggccaa catcagcggc cggctgtcgg gtatggccaa tgcttccgg
900
acggtgtacc agctcaacgg cctggccggc tacttcaaag gcattccaggc gcgtgtcatc
960
taccagatgc cctccaccgc catttcttg tctgtctatg agttcttcaa gtactttctc
1020
accaagcgcc agctggaaaa tcgagctcca tactaaagga agggatcata gaatcttttc
1080
ttaaagtcat tctctgcctg catccagccc cttgcctct cctcacacgt agatcatttt
1140

```

ttttttttgc aggggtgctgc ctatgggccc tctgctcccc aatgccttag agagaggagg  
 1200  
 ggacgggacg gcacggccgc tcaccggaag gctgtgtgcg gggacatccg aggtgggtgt  
 1260  
 ggacaggaag gacttgggaa ggggagcgag aaattgcttt ttctcttcct ccttgggcag  
 1320  
 aatgtagctt ttctgcttca ctgtggcagc ctctccctg gatccttaga tcccagagga  
 1380  
 gggaagaaaa ttgcagtga ctgaaaacag taaaaaaaaa aaaatttatg tatataaaag  
 1440  
 ttgcattaca cagtacaaaa tagatggata atgtttatcc tttatttttc tatgtagaag  
 1500  
 tttttgaatt tgtgtgtgtg cttgtgcgtg tctacaccta gtattacggc tgggactctc  
 1560  
 cagctgtttt tgttgttgtt atgtttttaa gaggggtgaa ttcttccatc aggtgaacga  
 1620  
 aaaaaggcaac aaagtaataa atcagtgaat gtggcggca gctgtgttta gcccctccag  
 1680  
 atggaagttt cacttgaatg taaaataata aagttt  
 1716

&lt;210&gt; 5488

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5488

Leu	Gly	Leu	Gln	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro	Lys	Ala
1				5					10					15	
Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Arg	Thr	Glu
			20					25					30		
Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met	Gly	Ala
		35					40					45			
Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met	Lys	Arg
		50				55					60				
Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu	Ala	Asn
65					70					75				80	
Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu	Leu	His	Asp	Ala	Val	Met	Asn
			85						90					95	
Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu	Gln	Met	Tyr	Asn	Ser	Gln	His
			100					105						110	
Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr	Val	Trp	Arg	Thr	Glu	Gly	Leu
		115					120					125			
Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr	Gln	Leu	Thr	Met	Asn	Ile	Pro
		130				135					140				
Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr	Glu	Phe	Leu	Gln	Glu	Gln	Val
145				150					155					160	
Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln	Ser	His	Ile	Ile	Ser	Gly	Gly
			165					170					175		
Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ala	Thr	Thr	Pro	Leu	Asp	Val	Cys
		180						185					190		
Lys	Thr	Leu	Leu	Asn	Thr	Gln	Glu	Asn	Val	Ala	Leu	Ser	Leu	Ala	Asn
		195				200						205			
Ile	Ser	Gly	Arg	Leu	Ser	Gly	Met	Ala	Asn	Ala	Phe	Arg	Thr	Val	Tyr



210		215		220	
Gln Leu Asn Gly Leu Ala Gly Tyr Phe Lys Gly Ile Gln Ala Arg Val					
225		230		235	240
Ile Tyr Gln Met Pro Ser Thr Ala Ile Ser Trp Ser Val Tyr Glu Phe					
	245		250		255
Phe Lys Tyr Phe Leu Thr Lys Arg Gln Leu Glu Asn Arg Ala Pro Tyr					
	260		265		270

&lt;210&gt; 5489

&lt;211&gt; 1600

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5489

```

aaatttcggg ctcaactcag gcattctccag gtgggtcatgg atttgggtcca tgagcttctt
60
cagcaagtc ccaaacggat cctggctgcg cctgtggcag aggttggtact gtttgcaagg
120
ctgttggtcg tgcctctgca gctgggggca gcagttctgg ggtgacatga tgcaccacgt
180
gtccaaattg gcacagagct gcaggacgtg gttgatggcc ccatcgagtt tggaggccca
240
gagaatccaa aactggagat gctggaaaag atcctgcaaa ggcagttcag tagctctaac
300
agccctcggg gtatcatctt caccgcacc cgccaaagcg cacactccct cctgctctgg
360
ctccagcagc agcagggcct gcagactgtg gacatccggg ccagctact gattggggct
420
gggaacagca gccagagcac ccacatgacc cagagggacc agcaagaagt gatccagaag
480
ttccaagatg gaacctgaa ccttctggtg gccacgagtg tggcggagga ggggctggac
540
atccacatt gcaatgtggt ggtgcgttat gggctcttga ccaatgaaat ctccatggtc
600
caggccaggg gccgtgccc ggcgatcag agtgatacgc cgtttgtagc aactgaaggt
660
agccgggagc tgaagcggga gctgatcaac gaggcgctgg agacgctgat ggagcaggca
720
gtggctgctg tgcagaaaat ggaccaggcc gagtaccagg ccaagatccg ggatctgcag
780
caggcagcct tgaccaagcg ggcggcccag gcagcccagc gggagaacca gcggcagcag
840
ttccagtg agcagtgca gctactctgc atcaactgca tgggtgctgt gggccatggc
900
agcgacctgc ggaaggtgga gggcaccac catgtcaatg tgaaccccaa cttctcgaac
960
tactataatg tctccaggga tcctgtggtc atcaacaaag tcttcaagga ctggaagcct
1020
gggggtgtca tcagctgcag gaactgtggg gaggtctggg gtctgcagat gatctacaag
1080
tcagtgaagc tgccagtgtc caaagtccgc agcatgctgc tggagacccc tcaggggagg
1140
atccaggcca aaaagtggtc ccgctgccc ttctccgtgc ctgactttga cttctcgcag
1200

```

cattgtgccg agaacttgtc ggacctctcc ctggactgac cacctcattg ctgcagtgcc  
 1260  
 cggtttgggc tgtagggggc gggagagtct gcagcagact ccaggcccct ccttcttgaa  
 1320  
 tcatacagctg tgggcatcag gccaccagc cacacaggag tcctgggcac cctggcttag  
 1380  
 gctcccgcaa tgggaaaaca accggagggc cagagcttag tccagaccta ccttgtacgc  
 1440  
 acatagacat tttcatatgc actggatgga gttagggaaa ctgaggcaaa agaatttgcc  
 1500  
 atactgtact cagaatcacg acattccttc cctaccaagg ccatttctat ttttgaggc  
 1560  
 tcctcataaa aataaatgaa aaaatgggat agaaaaaaaa  
 1600

&lt;210&gt; 5490

&lt;211&gt; 357

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5490

His Asp Ala Pro Arg Val Gln Ile Gly Thr Glu Leu Gln Asp Val Val  
 1 5 10 15  
 Asp Gly Pro Ile Glu Phe Gly Gly Pro Glu Asn Pro Lys Leu Glu Met  
 20 25 30  
 Leu Glu Lys Ile Leu Gln Arg Gln Phe Ser Ser Ser Asn Ser Pro Arg  
 35 40 45  
 Gly Ile Ile Phe Thr Arg Thr Arg Gln Ser Ala His Ser Leu Leu Leu  
 50 55 60  
 Trp Leu Gln Gln Gln Gln Gly Leu Gln Thr Val Asp Ile Arg Ala Gln  
 65 70 75 80  
 Leu Leu Ile Gly Ala Gly Asn Ser Ser Gln Ser Thr His Met Thr Gln  
 85 90 95  
 Arg Asp Gln Gln Glu Val Ile Gln Lys Phe Gln Asp Gly Thr Leu Asn  
 100 105 110  
 Leu Leu Val Ala Thr Ser Val Ala Glu Glu Gly Leu Asp Ile Pro His  
 115 120 125  
 Cys Asn Val Val Val Arg Tyr Gly Leu Leu Thr Asn Glu Ile Ser Met  
 130 135 140  
 Val Gln Ala Arg Gly Arg Ala Arg Ala Asp Gln Ser Val Tyr Ala Phe  
 145 150 155 160  
 Val Ala Thr Glu Gly Ser Arg Glu Leu Lys Arg Glu Leu Ile Asn Glu  
 165 170 175  
 Ala Leu Glu Thr Leu Met Glu Gln Ala Val Ala Val Gln Lys Met  
 180 185 190  
 Asp Gln Ala Glu Tyr Gln Ala Lys Ile Arg Asp Leu Gln Gln Ala Ala  
 195 200 205  
 Leu Thr Lys Arg Ala Ala Gln Ala Ala Gln Arg Glu Asn Gln Arg Gln  
 210 215 220  
 Gln Phe Pro Val Glu His Val Gln Leu Leu Cys Ile Asn Cys Met Val  
 225 230 235 240  
 Ala Val Gly His Gly Ser Asp Leu Arg Lys Val Glu Gly Thr His His  
 245 250 255  
 Val Asn Val Asn Pro Asn Phe Ser Asn Tyr Tyr Asn Val Ser Arg Asp

260 265 270  
 Pro Val Val Ile Asn Lys Val Phe Lys Asp Trp Lys Pro Gly Gly Val  
 275 280 285  
 Ile Ser Cys Arg Asn Cys Gly Glu Val Trp Gly Leu Gln Met Ile Tyr  
 290 295 300  
 Lys Ser Val Lys Leu Pro Val Leu Lys Val Arg Ser Met Leu Leu Glu  
 305 310 315 320  
 Thr Pro Gln Gly Arg Ile Gln Ala Lys Lys Trp Ser Arg Val Pro Phe  
 325 330 335  
 Ser Val Pro Asp Phe Asp Phe Leu Gln His Cys Ala Glu Asn Leu Ser  
 340 345 350  
 Asp Leu Ser Leu Asp  
 355

&lt;210&gt; 5491

&lt;211&gt; 5555

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5491

nntggcgagg cggaagcac ceggaatctt cctggccta gagcctgcag gctccaggcc  
 60  
 ggccccttga atctcaccgc gaggaaggca cctgctgcc tgcacttatt tgcattcaag  
 120  
 agtttgcatt gagactggcg cttgcctact agggcagcca caggggggtt cccaggggac  
 180  
 agagattatg tctactttga gaattcctcc agcaacccat acctaataag aaggatagaa  
 240  
 gaactcaaca agactgcaag tggcaacgtg gaagcaaaag tagtatgctt ttatagacga  
 300  
 cgtgatattt ccaacacact tataatgctc gcagataagc atgctaaaga aattgaggaa  
 360  
 gaatctgaaa caacagttga ggctgacttg accgataagc agaaacatca gttgaaacat  
 420  
 aggggaactct ttttgcacg ccagtatgaa tctctgccc caacacatat caggggaaaag  
 480  
 tgcagtgttg ccttctgaa tgagacagaa tcagtattgt catatcttga taaggaggat  
 540  
 accttcttct actcattggt ctatgacccc tcattgaaaa cactattagc tgacaaaggt  
 600  
 gaaatcagag tgggacctag atatcaagca gacattccag aaatgctgtt agaaggagaa  
 660  
 tcagatgaga gggaacaatc aaaattggaa gttaaagttt gggatccaaa tagcccactt  
 720  
 acggatcgac agattgacca gtttttagtt gtagcacgtg ctgttgggac attcgccaga  
 780  
 gccctggatt gcagcagttc tgtgaggcag cctagtttgc atatgagtgc tgctgcagct  
 840  
 tcccgagaca tcacctgtt tcacgctatg gatacattgt atagacacag ctatgatttg  
 900  
 agcagtgcc aattgtgtt agtaccactc ggaggacctg ttttatgcag agatgaaatg  
 960  
 gaggaatggt cagcctctga agctagctta ttgaagagg cactggaaaa atatggcaaa  
 1020

gacttcaatg acatacggca agattttctt ccttggaat cattgactag catcattgaa  
1080  
tattattaca tgtggaaaac tactgacaga tatgtgcaac agaaacgtct aaaagcagca  
1140  
gaagctgaga gtaaactgaa acaagtatat atcccaacct acagcaaacc aaatcccaac  
1200  
caaatatcca ctagtaatgg gaagcctggt gctgtgaatg gagctgtggg gaccacgttc  
1260  
cagcctcaga atcctctctt agggagagcc tgtgagagct gctatgctac acagtctcac  
1320  
cagtgggtatt cttggggccc acctaatatg cagtgtagat tatgtgcaat ttgttggtt  
1380  
tattggaaaa aatatggagg cttgaaaatg cccaccagc cagaagaaga gaagttatct  
1440  
cctagcccaa ctacagagga ccctcgtgtt agaagtcacg tgtcccgcca ggccatgcag  
1500  
ggaatgccag tccgaaacac tgggagtcga aagtctgcag tgaagaccgg ccaagctttc  
1560  
ttccttcata ctacatattt cacaaaattt gctcgtcagg tctgcaaaaa taccctccgg  
1620  
ctgcggcagg cagcaagacg gccgtttgtt gctattaatt atgctgcat tagggcagaa  
1680  
tatgccgaca gacatgctga actatctgga agtccactga aaagcaaaag cactaggaag  
1740  
cctttggcat gtatcattgg gtatttagag atccatcctg caaagaaacc taatgtaatt  
1800  
cgatctacac caagcctgca aacccccact accaagcggg tgctaacaac tccaaatcac  
1860  
acatctctga gcattctggg gaaaagaaac tacagtcac acaatggtct ggatgaactc  
1920  
acgtgctgtg tgcagactg agctttccct gattcattct acaatccaag acttgcgtga  
1980  
ctgtcctgct gatgttcaca gccgtgctg ggaagaaggc agccccactc ccagtacatt  
2040  
tcagtgggag acctctgcgt gcatccatgg agacgcaatg gggcggggaa ggaactgtgg  
2100  
gagtgcagt tccaaatcct gtgtctccac gtgtggatca gcagcacctc gctttcttgt  
2160  
cagagacctc gctgttacgg agcgagacct gctgagaatt gaggggctga gggaacccct  
2220  
ccacctctc cttctgcag cgcctgcgc cccaccagc aacagcggcc acttggcagt  
2280  
ggggctgtg caagctcaga gccgtgcca ccctgcatgt gtccgctcag ctcggtctta  
2340  
tgctgtatag ttactaaata tgtacaggag ggccatggca tctttctgaa tggatttttc  
2400  
ttaagaaatg cgccagtgtt tatgaggttc aaggtatttc cctgtccttg ctgttaccgt  
2460  
cactcagctt tttctcgata ggcttcatcc ttgttttttt gaaatggggg aatttgctgt  
2520  
ttacctctg cattctata tgtgacctc cctctactc ctccaaggaa cagaattacc  
2580  
gaggttctga caaaagataa gcctgtaaac tcatcatctg tgttttgtgg ttggagagaa  
2640

actggtgttc tgcccggctc tgcttgggtca cagacagctc cagcaagagc agttgttaaa  
2700  
agtgccaaagc gtgtgtatca ctgtgacaag ccgtttgctt actgccctgt tcccttgacg  
2760  
ccaaaccagc tgatgaagaa ctgctgccag gtgggtccta cagcaggta caaatgacct  
2820  
agtttcattt taagcagaca gactctgttt ggcctagagg tgtggagtga gagaactgtg  
2880  
tttgtgggta tgagtctgtg tggccaaccc catgaccccc acccctccag cccaacatct  
2940  
tgtgagcaca tgtgacctag gccccggggg acctgcctgc tcccttggtt tgggtctctc  
3000  
gtgtttccca cctgccctcg gcacgagccc ttggtggcat cacagttggc cactcagctg  
3060  
tgctgagtag ctgtgctact tgtgtggca gctgcaagga taggaatagc tcagcgcccc  
3120  
atgagctccc tgagcagatg tgaggctggc aactccccctg ccctctgttt gcaggcacag  
3180  
ggtcacagtc ccaagaaaga caactggagt ctgatctccc agccatctct ggggttacta  
3240  
ggaggcagct ggatggcaga tacgagaggc ccaaatagcc aagctgttgc aagacagagt  
3300  
ggctacaatt gaattgacac cctgggaagc acgaggtaac ttggttaagga taatgatgct  
3360  
gtagatgtct gtgtcctcgg aggctgagct ccgcttggca gagagagcgt gctgtgtgag  
3420  
gtggagggcg gttttgcaga catctcagct tctttctga ggaggagtgt gttctcatct  
3480  
taggcttctg caaggcgag catgggatgt ctccaccacc acccactctt ggagctgtgc  
3540  
tgggtcttgg cttggggcgc tgagggtggg gcctgtgtca gaagcatttg gtgagagggg  
3600  
tggaggtggc aggcaggggt tctcctcagg gtcccaactg aggggtccct tcagcaaaga  
3660  
cctgggagga ggtgccgcat cacgtggatg tttcttccct aaagaaaaag acacaggaaa  
3720  
gctgtctgtc tgtacctgc tctggattta ttgtcgtact tggaccaga aggggaaatg  
3780  
attccctcac cctttcactt tctctctgaa cccctactaa gtggtgactg cagattctgg  
3840  
aaacaattag ctgcccgtga ctcagctgcc agcttcattt tctctgcctt ttgggagagg  
3900  
ccctctcacc caggcccaag agatttgag acaggagtca ggccaggctt gaagcaggag  
3960  
aaggagggcc cctcctatct acccagttga catttggtt tgggaaaagc gcagcttgtt  
4020  
cgagccacgt gtgccaagca ggcttttctt tctcttgta agtaaagctc gtggttctgt  
4080  
agtccagtca tctaggagg gtgatgttga ctgagacttc acgctctccc tttgtctctg  
4140  
gaaactgccc cctcgttctg acagaatccc ccaggcaatg gaggaagggt gccgaggcgc  
4200  
ctctagtctg tgcctttgcc gttggaagca tttggtgctg agagggttcc ccagccaccc  
4260

gctccctttc tggggccatg gtgtccctgc tgtgtgtcag tggcatgtca ctgtggttca  
 4320  
 gtgagcacat ggggtggacgt gcagagactg tctgcgcagc ccccagcaga catgccctg  
 4380  
 ggggtgaggac acaggctctg caggctatct cccctctgg ctcagtcac gctgcccac  
 4440  
 ccttcacttc ttaaagggtgc gcaagagagg agggccgact ggagggtgtc gccggaaggt  
 4500  
 ttcagcctgc ccttcacaat tccccctgtg cacagcccag ttccatctc tcagggccca  
 4560  
 cccaggaaaa tggatttcaa gtgggggttt tcatccagag atttgtttaa cacaaaaaca  
 4620  
 gaaaagctga gaggcacaaac aggggagtga ggggcaacc agagggtggg aacaacaaca  
 4680  
 gcaagccgcc cccatcctgt gactggctgg gcaccagggg aggacgcgtc accagagcct  
 4740  
 ggggccaaagg ccactggggg acctgccaca ctgtggacct gtctgggtgg ggctggagcc  
 4800  
 tcgagaagcc atgattcttg tcagaaacat tccccaggc agagagaggg ggccccagcc  
 4860  
 tctccctcc tcttggcctc cagagtcctg cagggtgcctc acagtagtga aaccagttg  
 4920  
 gaagcagctg ccctggggagc ctgggacagg cgaccaccg ggtcagtcct ctgccactca  
 4980  
 gagcagagca gggggctgag ggcaagcagg tggggctgtg cgtggcctca gtgcaactcg  
 5040  
 tgtcatgtct gagectggtg tttatgcccc actgctgtcc taagtcctg gcgaggggag  
 5100  
 gtggaggagc tgccccgtgg gtgtttggag attctgtttt actctgccta gagaggaaac  
 5160  
 ggctttgggg agggaggggg aagcctttat tctttactgt tgtccctgtt ttcctttggg  
 5220  
 ggaatttact cagttagcag cccctcctca ccattcccc caggaaggcc atgtcccagt  
 5280  
 tttctgtcca cccctcctgt tcctctgcac tatgtctctg atttccctg ccagggaage  
 5340  
 taaccacag cagcaccctg tgctcatgag tgtttccgca ggataattcg ttctgagcat  
 5400  
 gataccacag tgtggattgt ctgtctgtaa ggagatgcc tctactaacc aattgtatt  
 5460  
 gtgtttccaa taaattcctg gaaattttgc ctggttttat gctgttcttt actaggatga  
 5520  
 tggctcaggt gtaagactgt gcacgcaccc ctagg  
 5555

&lt;210&gt; 5492

&lt;211&gt; 602

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5492

Asp Trp Arg Leu Pro Thr Arg Ala Ala Thr Gly Gly Phe Pro Arg Asp

1

5

10

15

Arg Asp Tyr Val Tyr Phe Glu Asn Ser Ser Ser Asn Pro Tyr Leu Ile

4667

450	455	460
Ser Pro Lys Ser Ala Val Lys Thr Arg Gln Ala Phe Phe Leu His Thr		
465	470	475
Thr Tyr Phe Thr Lys Phe Ala Arg Gln Val Cys Lys Asn Thr Leu Arg		480
	485	490
Leu Arg Gln Ala Ala Arg Arg Pro Phe Val Ala Ile Asn Tyr Ala Ala		495
	500	505
Ile Arg Ala Glu Tyr Ala Asp Arg His Ala Glu Leu Ser Gly Ser Pro		510
	515	520
Leu Lys Ser Lys Ser Thr Arg Lys Pro Leu Ala Cys Ile Ile Gly Tyr		525
	530	535
Leu Glu Ile His Pro Ala Lys Lys Pro Asn Val Ile Arg Ser Thr Pro		540
545	550	555
Ser Leu Gln Thr Pro Thr Thr Lys Arg Met Leu Thr Thr Pro Asn His		560
	565	570
Thr Ser Leu Ser Ile Leu Gly Lys Arg Asn Tyr Ser His His Asn Gly		575
	580	585
Leu Asp Glu Leu Thr Cys Cys Val Ser Asp		590
	595	600

&lt;210&gt; 5493

&lt;211&gt; 6538

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5493

```

nncttcctga cgggcgcgcg cagcctgctg ccgcgggtcag cgccctgctcc tgctcctccg
60
ctcctcctgc gcggggtgct gaaacagccc ggggaagtag agccgcctcc ggggagccca
120
accagccgaa cgccgccggc gtcagcagcc ttgcgcggcc acagcatgac cgctcgcggc
180
ctggcccttg gcctcctcct gctgctactg tgtccagcgc aggtgttttc acagtctgtg
240
gtttggtatg gagagtgtgg aattgcatat ggggacaaga ggtacaattg cgaatattct
300
ggccaccaa aaccattgcc aaaggatgga tatgacttag tgcaggaact ctgtccagga
360
ttcttctttg gcaatgtcag tctctgttgt gatgttcggc agcttcagac actaaaagac
420
aacctgcagc tgctctaca gtttctgtcc agatgtccat cctgttttta taacctactg
480
aacctgtttt gtgagctgac atgtagccct cgacagagtc agtttttgaa tgttacagct
540
actgaagatt atgttgatcc tgttacaac cagacgaaa caaatgtgaa agagttacaa
600
tactacgtcg gacagagttt tgccaatgca atgtacaatg cctgccggga tgtggaggcc
660
ccctcaagta atgacaaggc cctgggactc ctgtgtggga aggacgctga cgccgtgaat
720
gccaccaact ggattgaata catgttcaat aaggacaatg gacaggcacc ttttaccatc
780
actcctgtgt tttcagattt tccagtcct gggatggagc ccatgaacaa tgccaccaa
840

```



ggctgtgacg agtctgtgga tgaggtcaca gcaccatgta gctgccaaga ctgctctatt  
900  
gtctgtggcc ccaagcccca gccccacct cctctgtctc cctggacgat ccttggttg  
960  
gacgccatgt atgtcatcat gtggatcacc tacatggcgt ttttgcctgt gttttttgga  
1020  
gcattttttg cagtgtggtg ctacagaaaa cggatatttg tctccgagta cactcccatc  
1080  
gatagcaata tagctttttc tgttaatgca agtgacaaag gagaggcgtc ctgctgtgac  
1140  
cctgtcagcg cagcatttga gggctgcttg aggcggctgt tcacacgctg ggggtctttc  
1200  
tgcgtccgaa accctggctg tgtcattttc ttctcgtctg tcttcattac tgcgtgttcg  
1260  
tcaggcctgg tgtttgtccg ggtcacaacc aatccagttg acctctggtc agccccagc  
1320  
agccaggctc gcctggaaaa agagtacttt gaccagcact ttgggccttt ctcccgacg  
1380  
gagcagctca tcatecgggc cctctcact gacaaacaca tttaccagcc atacccttcg  
1440  
ggagctgatg taccctttgg acctccgctt gacatacaga tactgcacca ggttcttgac  
1500  
ttacaaatag ccatcgaaaa cattactgcc tcttatgaca atgagactgt gacacttcaa  
1560  
gacatctgct tggccctctt ttcaccgtat aacacgaact gcaccatttt gagtgtgtta  
1620  
aattacttcc agaacagcca ttccgtgctg gaccacaaga aaggggacga cttctttgtg  
1680  
tatgccgatt accacaagca ctttctgtac tgcgtacggg ctctgcctc totgaatgat  
1740  
acaagtttgc tccatgaccc ttgtctgggt acgtttggtg gaccagtgtt cccgtggctt  
1800  
gtgttgggag gctatgatga tcaaaactac aataacgcca ctgcccttgt gattaccttc  
1860  
cctgtcaata attactataa tgatacagag aagctccaga gggcccaggc ctgggaaaaa  
1920  
gagtttatta attttgtgaa aaactacaag aatcccaatc tgaccatttc cttcactgct  
1980  
gaacgaagta ttgaagatga actaaatcgt gaaagtgaca gtgatgtctt caccgttgta  
2040  
attagctatg ccatcatggt tctatatatt tccctagcct tggggcacat caaaagctgt  
2100  
cgcaggcttc tgggtgattc gaaggtctca ctaggcacg cgggcacctt gatcgtgctg  
2160  
agctcgggtg cttgctcctt ggggtctctc agctacattg ggttgccctt gacctcatt  
2220  
gtgattgaag tcatcccggt cctggtgctg gctgttggag tggacaacat cttcattctg  
2280  
gtgcaggcct accagagaga tgaacgtctt caaggggaaa ccctggatca gcagctgggc  
2340  
agggtcctag gagaagtggc tcccagtatg ttctgtcat cttttctga gactgtagca  
2400  
tttttcttag gagcattgtc cgtgatgcca gccgtgcaca cttctctctt ctttgcgga  
2460

ttggcagtct tcattgactt tcttctgcag attacctgtt tcgtgagtct cttgggggtta  
2520  
gacattaaac gtcaagagaa aaatcggtta gacatctttt gctgtgtcag aggtgctgaa  
2580  
gatggaacaa gcgtccaggc ctcagagagc tgtttgtttc gcttcttcaa aaactcctat  
2640  
tctccacttc tgctaaagga ctggatgaga ccaattgtga tagcaatatt tgtgggtgtt  
2700  
ctgtcattca gcatcgagc cctgaacaaa gtagatattg gattggatca gtctctttcg  
2760  
atgccagatg actcctacat ggtggattat ttcaaatacca tcagtcagta cctgcatgcy  
2820  
ggtcgcctg tgacttttgt cctggaggaa gggcagcact acacttcttc caaggggcag  
2880  
aacatggtgt gcggcgcat gggctgcaac aatgattccc tggtcagca gatatttaac  
2940  
gcggcgagc tggacaatta taccgaata ggcttcgccc cctcgctctg gatcgacgat  
3000  
tatttcgact ggggtgaagcc acagtcgtct tgctgtcgag tggacaatat cactgaccag  
3060  
ttctgcaatg cttcagtggc tgacctgcc tgcgttcgct gcaggcctct gactccggga  
3120  
ggcaaacaga ggctcaggc gggagacttc atgagattcc tgcccatgtt cctttcggat  
3180  
aacctaacc ccaagtgtgg caaaggggga catgtgcct atagttctgc agttaacatc  
3240  
ctccttgccc atggcaccag ggtcggagcc acgtacttca tgacctacca caccgtgctg  
3300  
cagacctctg ctgactttat tgacgtctg aagaaagccc gacttatagc cagtaatgct  
3360  
accgaaacca tgggcattaa cggcagtgcc taccgagat ttccttacag tgtgttttat  
3420  
gtcttctacg aacagtacct gaccatcatt gacgacacta tcttcaacct cgggtgtgccc  
3480  
ctgggcgaga tatttctggt gaccatggct ctcctgggct gtgagctctg gtctgcagtc  
3540  
atcatgtgtg ccaccatcgc catggtcttg gtcaacatgt ttggagttat gtggctctgg  
3600  
ggcatcagtc tgaacgtgt atccttggtc aacctggtga tgagctgtgg catctccgtg  
3660  
gagttctgca gccacataac cagagcgttc acggtgagca tgaaaggcag ccgctggag  
3720  
cgcgcggaag aggcacttgc ccacatgggc agctccgtgt tcagtggaat cacacttaca  
3780  
aaatttgag ggattgtggt gttggctttt gccaaatctc aaattttcca gatattctac  
3840  
ttcaggatgt atttgccat ggtcttactg ggagccactc acggattaat atttctccct  
3900  
gtcttactca gttacatagg gccatcagta aataaagcca aaagttgtgc cactgaagag  
3960  
cgatacaaag gaacagagcg cgaacggctt ctaaatttct agccctctcg cagggcatcc  
4020  
tgactgaact gtgtctaagg gtcggctggt ttaccactgg acgggtgctg catcggcaag  
4080

gccaggttga acaccggatg gtgccaacca tgggttgttt ggcagcagct ttgaacgtag  
4140  
cgctgtgaa ctcaggaatg cacagttgac ttgggaagca gtattactag atctggaggc  
4200  
aaccacagga cactaaactt ctcccagcct cttcaggaaa gaaacctcat tctttggcaa  
4260  
gcaggagggtg acactagatg gctgtgaatg tgatccgctc actgacactc tgtaaaggcc  
4320  
aatcaatgca ctgtctgtct ctcttttttag gagtaagcca tcccacaagt tctataccat  
4380  
atttttagtg acagttgagg ttgtagatac actttataac attttatagt ttaaagagct  
4440  
ttattaatgc aataaattaa ctttgtacac atttttatat aaaaaaacag caagtgattt  
4500  
cagaatgttg taggcctcat tagagcttgg tctccaaaaa tctgtttgaa aaaagcaaca  
4560  
tgttcttcac agtggtcccc tgggtgtgaaa ttggggctcc ctgcgaaacg ctgggttcgc  
4620  
tgttcaaaaa agcggaatat tgtatagaaa agcatgttgt cttcagctcg ctttgcagca  
4680  
tctaaaaatt ttcgtgcaga aatgttgtca tggccaccaa tgccccggat aaaccttaag  
4740  
gcagctaaca cttggtgttt ggaaaggaga acttctacta tttcatcatt tgctgttgaa  
4800  
agtcgcttca gcatgtccag agatagctga tgagcaggag gatagaaact ctctagggat  
4860  
aacagcagac aagccaaagg tttggagtcg ctgaggacgt ggtactgcag gaactgatgc  
4920  
agcatataaa agaggttgtg ctggacaagg gttttgataa caagttcatg taggtaatgc  
4980  
tgtactgcaa tctgaaactg gttaagagaa cgaatgtatt ccatcagcac ggctatcaca  
5040  
aatttatgag gcatctcctt cttttgccga tagtgtttaa atactccgta gaggaagaaa  
5100  
tccacgaagg ctgacaggac atgggtgtac acatctgact ggtccagcac cgctgggtc  
5160  
cgcaccggcc tcttgaggag cgggctgctt cggctctgcc ctgcttcac cgccatcgca  
5220  
taactctgct cggcatccag gtacttttta tactcatggt tgagtttate aaaaacagt  
5280  
gctatcacgg gcagcgatgc tctgtctgac tcaacttaaca tctgtgaaca gacagacagg  
5340  
atgaccatct tgcattcctt tctctggagg agaaagtcca tgagtcttcc tttgtctggt  
5400  
aagagattta ctatgggctc aagtttcaact tggaggttcc agaggttaacc ttggcttgcg  
5460  
ctgataatga tgtcagggtg aaagacaatc caagatgaag aatagagttt acatggaaca  
5520  
ggagactggc tggtcacggc agcaggacct gtgatgggga tctgataggg ctggatcgat  
5580  
cgagcgggaa gcacgggggtg gtggaaggta acggagccgt caaactctcc ccgtaacttg  
5640  
atatcgaata ttaccgatgt ctctgtatcc tgatgatgca cgactaccag gttgtccacc  
5700

acgttcaggg caaactttcc cgtcctatatt aacttcaata tgtgcatctt ttacaggca  
 5760  
 ccttctcgtg gtagatgata gaggaccacc tccgctcctg tgctgttgga ggtccgagaa  
 5820  
 tgatgcctca agaagagAAC atacagctgc ccgtatatgg tagccattgc gatgtctctt  
 5880  
 tcggaaaggc tgggtttagt tgacttaggc gcagctggta attcaatctc aaatttgggc  
 5940  
 agcttcgaca tagtgccagc cctaaagtga aaaggctgca ggacattctc caggaccgtg  
 6000  
 gtagacagca agatcacggc gctctcgggg cagtacatgt accaattcac attgagattg  
 6060  
 tggctcttca agagtttcag actccgtttc tctggtaata cctggtaaaa ttcgattcct  
 6120  
 tgatctgtta tgaagacaat ttcagttgaa ctagtccagc agaatcctag aatgttggca  
 6180  
 ttcttagtct tgcactcctg tgtgtattcc agctgggaat tatcagggaat aaaattacaa  
 6240  
 aaatccacag tctttgaggt cctctgaaca gccaatatct tattttctaa ggaaaactta  
 6300  
 atgcacttca cttctccttt gtcattccatt ctaaagaga tgggattcct atcatctggg  
 6360  
 cctttaacta ccacgccagt agctccacca gatcgacag caaaaacctg cttgttggcc  
 6420  
 tcatcgaaga agacgcagtt gacagggttc gccttctcga actgcaccgg ccgctcgcac  
 6480  
 agctccagat agtagtcctc ctgcccattg gcggggcgccg cggccggggc gggggccc  
 6538

<210> 5494

<211> 1278

<212> PRT

<213> Homo sapiens

<400> 5494

Met	Thr	Ala	Arg	Gly	Leu	Ala	Leu	Gly	Leu	Leu	Leu	Leu	Leu	Cys
1				5				10					15	
Pro	Ala	Gln	Val	Phe	Ser	Gln	Ser	Cys	Val	Trp	Tyr	Gly	Glu	Cys
			20					25					30	
Ile	Ala	Tyr	Gly	Asp	Lys	Arg	Tyr	Asn	Cys	Glu	Tyr	Ser	Gly	Pro
			35					40					45	
Lys	Pro	Leu	Pro	Lys	Asp	Gly	Tyr	Asp	Leu	Val	Gln	Glu	Leu	Cys
			50					55					60	
Gly	Phe	Phe	Phe	Gly	Asn	Val	Ser	Leu	Cys	Cys	Asp	Val	Arg	Gln
						70					75			80
Gln	Thr	Leu	Lys	Asp	Asn	Leu	Gln	Leu	Pro	Leu	Gln	Phe	Leu	Ser
						85					90			95
Cys	Pro	Ser	Cys	Phe	Tyr	Asn	Leu	Leu	Asn	Leu	Phe	Cys	Glu	Leu
						100					105			110
Cys	Ser	Pro	Arg	Gln	Ser	Gln	Phe	Leu	Asn	Val	Thr	Ala	Thr	Glu
						115					120			125
Tyr	Val	Asp	Pro	Val	Thr	Asn	Gln	Thr	Lys	Thr	Asn	Val	Lys	Glu
						130					135			140
Gln	Tyr	Tyr	Val	Gly	Gln	Ser	Phe	Ala	Asn	Ala	Met	Tyr	Asn	Ala
														Cys

145					150					155				160
Arg	Asp	Val	Glu	Ala	Pro	Ser	Ser	Asn	Asp	Lys	Ala	Leu	Gly	Leu
				165					170					175
Cys	Gly	Lys	Asp	Ala	Asp	Ala	Cys	Asn	Ala	Thr	Asn	Trp	Ile	Glu
			180					185					190	
Met	Phe	Asn	Lys	Asp	Asn	Gly	Gln	Ala	Pro	Phe	Thr	Ile	Thr	Pro
		195					200					205		
Phe	Ser	Asp	Phe	Pro	Val	His	Gly	Met	Glu	Pro	Met	Asn	Asn	Ala
	210					215					220			
Lys	Gly	Cys	Asp	Glu	Ser	Val	Asp	Glu	Val	Thr	Ala	Pro	Cys	Ser
225					230					235				240
Gln	Asp	Cys	Ser	Ile	Val	Cys	Gly	Pro	Lys	Pro	Gln	Pro	Pro	Pro
			245						250				255	
Pro	Ala	Pro	Trp	Thr	Ile	Leu	Gly	Leu	Asp	Ala	Met	Tyr	Val	Ile
			260					265					270	
Trp	Ile	Thr	Tyr	Met	Ala	Phe	Leu	Leu	Val	Phe	Phe	Gly	Ala	Phe
		275					280					285		
Ala	Val	Trp	Cys	Tyr	Arg	Lys	Arg	Tyr	Phe	Val	Ser	Glu	Tyr	Thr
	290					295					300			
Ile	Asp	Ser	Asn	Ile	Ala	Phe	Ser	Val	Asn	Ala	Ser	Asp	Lys	Gly
305					310					315				320
Ala	Ser	Cys	Cys	Asp	Pro	Val	Ser	Ala	Ala	Phe	Glu	Gly	Cys	Leu
			325						330				335	
Arg	Leu	Phe	Thr	Arg	Trp	Gly	Ser	Phe	Cys	Val	Arg	Asn	Pro	Gly
			340					345				350		
Val	Ile	Phe	Phe	Ser	Leu	Val	Phe	Ile	Thr	Ala	Cys	Ser	Ser	Gly
		355					360				365			
Val	Phe	Val	Arg	Val	Thr	Thr	Asn	Pro	Val	Asp	Leu	Trp	Ser	Ala
	370					375				380				
Ser	Ser	Gln	Ala	Arg	Leu	Glu	Lys	Glu	Tyr	Phe	Asp	Gln	His	Phe
385					390					395				400
Pro	Phe	Phe	Arg	Thr	Glu	Gln	Leu	Ile	Ile	Arg	Ala	Pro	Leu	Thr
			405						410				415	
Lys	His	Ile	Tyr	Gln	Pro	Tyr	Pro	Ser	Gly	Ala	Asp	Val	Pro	Phe
			420					425				430		
Pro	Pro	Leu	Asp	Ile	Gln	Ile	Leu	His	Gln	Val	Leu	Asp	Leu	Gln
		435					440				445			
Ala	Ile	Glu	Asn	Ile	Thr	Ala	Ser	Tyr	Asp	Asn	Glu	Thr	Val	Thr
	450					455				460				
Gln	Asp	Ile	Cys	Leu	Ala	Pro	Leu	Ser	Pro	Tyr	Asn	Thr	Asn	Cys
465					470					475				480
Ile	Leu	Ser	Val	Leu	Asn	Tyr	Phe	Gln	Asn	Ser	His	Ser	Val	Leu
			485						490				495	
His	Lys	Lys	Gly	Asp	Asp	Phe	Phe	Val	Tyr	Ala	Asp	Tyr	His	Thr
			500					505				510		
Phe	Leu	Tyr	Cys	Val	Arg	Ala	Pro	Ala	Ser	Leu	Asn	Asp	Thr	Ser
	515						520					525		
Leu	His	Asp	Pro	Cys	Leu	Gly	Thr	Phe	Gly	Gly	Pro	Val	Phe	Pro
	530					535					540			
Leu	Val	Leu	Gly	Gly	Tyr	Asp	Asp	Gln	Asn	Tyr	Asn	Asn	Ala	Thr
545					550					555				560
Leu	Val	Ile	Thr	Phe	Pro	Val	Asn	Asn	Tyr	Tyr	Asn	Asp	Thr	Glu
			565						570				575	
Leu	Gln	Arg	Ala	Gln	Ala	Trp	Glu	Lys	Glu	Phe	Ile	Asn	Phe	Val

580 585 590  
 Asn Tyr Lys Asn Pro Asn Leu Thr Ile Ser Phe Thr Ala Glu Arg Ser  
 595 600 605  
 Ile Glu Asp Glu Leu Asn Arg Glu Ser Asp Ser Asp Val Phe Thr Val  
 610 615 620  
 Val Ile Ser Tyr Ala Ile Met Phe Leu Tyr Ile Ser Leu Ala Leu Gly  
 625 630 635 640  
 His Ile Lys Ser Cys Arg Arg Leu Leu Val Asp Ser Lys Val Ser Leu  
 645 650 655  
 Gly Ile Ala Gly Ile Leu Ile Val Leu Ser Ser Val Ala Cys Ser Leu  
 660 665 670  
 Gly Val Phe Ser Tyr Ile Gly Leu Pro Leu Thr Leu Ile Val Ile Glu  
 675 680 685  
 Val Ile Pro Phe Leu Val Leu Ala Val Gly Val Asp Asn Ile Phe Ile  
 690 695 700  
 Leu Val Gln Ala Tyr Gln Arg Asp Glu Arg Leu Gln Gly Glu Thr Leu  
 705 710 715 720  
 Asp Gln Gln Leu Gly Arg Val Leu Gly Glu Val Ala Pro Ser Met Phe  
 725 730 735  
 Leu Ser Ser Phe Ser Glu Thr Val Ala Phe Phe Leu Gly Ala Leu Ser  
 740 745 750  
 Val Met Pro Ala Val His Thr Phe Ser Leu Phe Ala Gly Leu Ala Val  
 755 760 765  
 Phe Ile Asp Phe Leu Leu Gln Ile Thr Cys Phe Val Ser Leu Leu Gly  
 770 775 780  
 Leu Asp Ile Lys Arg Gln Glu Lys Asn Arg Leu Asp Ile Phe Cys Cys  
 785 790 795 800  
 Val Arg Gly Ala Glu Asp Gly Thr Ser Val Gln Ala Ser Glu Ser Cys  
 805 810 815  
 Leu Phe Arg Phe Lys Asn Ser Tyr Ser Pro Leu Leu Lys Asp  
 820 825 830  
 Trp Met Arg Pro Ile Val Ile Ala Ile Phe Val Gly Val Leu Ser Phe  
 835 840 845  
 Ser Ile Ala Val Leu Asn Lys Val Asp Ile Gly Leu Asp Gln Ser Leu  
 850 855 860  
 Ser Met Pro Asp Asp Ser Tyr Met Val Asp Tyr Phe Lys Ser Ile Ser  
 865 870 875 880  
 Gln Tyr Leu His Ala Gly Pro Pro Val Tyr Phe Val Leu Glu Glu Gly  
 885 890 895  
 His Asp Tyr Thr Ser Ser Lys Gly Gln Asn Met Val Cys Gly Gly Met  
 900 905 910  
 Gly Cys Asn Asn Asp Ser Leu Val Gln Gln Ile Phe Asn Ala Ala Gln  
 915 920 925  
 Leu Asp Asn Tyr Thr Arg Ile Gly Phe Ala Pro Ser Ser Trp Ile Asp  
 930 935 940  
 Asp Tyr Phe Asp Trp Val Lys Pro Gln Ser Ser Cys Cys Arg Val Asp  
 945 950 955 960  
 Asn Ile Thr Asp Gln Phe Cys Asn Ala Ser Val Val Asp Pro Ala Cys  
 965 970 975  
 Val Arg Cys Arg Pro Leu Thr Pro Gly Gly Lys Gln Arg Pro Gln Gly  
 980 985 990  
 Gly Asp Phe Met Arg Phe Leu Pro Met Phe Leu Ser Asp Asn Pro Asn  
 995 1000 1005  
 Pro Lys Cys Gly Lys Gly Gly His Ala Ala Tyr Ser Ser Ala Val Asn

1010 1015 1020  
 Ile Leu Leu Gly His Gly Thr Arg Val Gly Ala Thr Tyr Phe Met Thr  
 1025 1030 1035 1040  
 Tyr His Thr Val Leu Gln Thr Ser Ala Asp Phe Ile Asp Ala Leu Lys  
 1045 1050 1055  
 Lys Ala Arg Leu Ile Ala Ser Asn Val Thr Glu Thr Met Gly Ile Asn  
 1060 1065 1070  
 Gly Ser Ala Tyr Arg Val Phe Pro Tyr Ser Val Phe Tyr Val Phe Tyr  
 1075 1080 1085  
 Glu Gln Tyr Leu Thr Ile Ile Asp Asp Thr Ile Phe Asn Leu Gly Val  
 1090 1095 1100  
 Ser Leu Gly Ala Ile Phe Leu Val Thr Met Val Leu Leu Gly Cys Glu  
 1105 1110 1115 1120  
 Leu Trp Ser Ala Val Ile Met Cys Ala Thr Ile Ala Met Val Leu Val  
 1125 1130 1135  
 Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu Asn Ala Val  
 1140 1145 1150  
 Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val Glu Phe Cys  
 1155 1160 1165  
 Ser His Ile Thr Arg Ala Phe Thr Val Ser Met Lys Gly Ser Arg Val  
 1170 1175 1180  
 Glu Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser Val Phe Ser  
 1185 1190 1195 1200  
 Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu Ala Phe Ala  
 1205 1210 1215  
 Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr Leu Ala Met  
 1220 1225 1230  
 Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro Val Leu Leu  
 1235 1240 1245  
 Ser Tyr Ile Gly Pro Ser Val Asn Lys Ala Lys Ser Cys Ala Thr Glu  
 1250 1255 1260  
 Glu Arg Tyr Lys Gly Thr Glu Arg Glu Arg Leu Leu Asn Phe  
 1265 1270 1275

&lt;210&gt; 5495

&lt;211&gt; 2414

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5495

agacctgcac cgggccaggc aagatggcgg ccatggagac cgagacggcg ccgctgaccc  
60

tagagtcgct gccaccgat cccctgctcc tcattttatc ctttttggac tatcgggac  
120

taatcaactg ttgttatgtc agtcgaagac ttagccagct atcaagtcac gatccgctgt  
180

ggagaagaca ttgcaaaaaa tactggctga tatctgagga agagaaaaca cagaagaac  
240

agtgttgga atctctcttc atagatactt actctgatgt aggaagatac attgaccatt  
300

atgctgctat taaaaaggcc tgggatgac tcaagaaata ttggagccc aggtgtctc  
360

ggatggtttt atctctgaaa gaggggtgctc gagaggaaga cctcgatgct gtggaagcgc  
420

agattgggct gcaagtttcc tggacgatta tcgatgttca taccgaattc acaatggaca  
480  
gaagttagtt ggttcctggg gttattggga agcatggcac tgtctaataca ctatcgttct  
540  
gaagatttgt tagacgtcga tacagctgcc ggaggattcc agcagagaca gggactgaaa  
600  
tactgtctcc cttaaacttt ttgcatacat actggtttga gtcagtacat agcagtggaa  
660  
gctgcagagg gccgaaacaa aaatgaagtt ttctaccaat gtccagacca aatggctcga  
720  
aatccagctg ctattgacat gtttattata ggtgctactt ttactgactg gtttacctct  
780  
tatgtcaaaa atgttgtatc aggtggcttc cccatcatca gagaccaaatt ttccagatat  
840  
gttcacgata cagaatgtgt agcaacaact ggggatatta ctgtgtcagt ttccacatcg  
900  
tttctgccag aacttagctc tgtacatcca cccactatt tcttcacata ccgaatcagg  
960  
attgaaatgt caaagatgc acttctgag aaggcctgtc agttggacag tcgctattgg  
1020  
agaataacaa atgctaaggg tgacgtggaa gaagttcaag gacctggagt agttggtgaa  
1080  
tttccaatca tcagcccagg tcgggtatat gaatacacia gctgtaccac atttcttaca  
1140  
acatcaggat acatggaagg gtattatacc ttccattttc ttacttttaa agacaagatc  
1200  
tttaatgttg ccattccccg attccatatg gcattgtcca cattcagggg gtctatagcc  
1260  
cgattggaaa tgggtcctga tgaatatgaa gagatggaag aagaggagga ggaggaagag  
1320  
gaggaagacg aggatgatga ttcagcagat atggatgaat cagatgaaga tgatgaagag  
1380  
gagagacgga ggagagtctt tgatgttccc attcgcagac gccgctgctc acgccttttt  
1440  
tagcaagcct tctgctgatg gaagcactag gatgattcta ggctgttaaa tagatttctc  
1500  
aataatgtaa ataactaaat tgttctctgc atatagcagg aaaactagca tgaaatattg  
1560  
tttcaggccc tgggttctat gtgacactac attaggaatt ggaattgtttg ggtttgcttt  
1620  
gtgtttttga ggtagaggaa gaaatgggaa tctttttttt ctcttcagg agtcagtgga  
1680  
agaatagttc tctagctaag gaacggacat acctttgttt taaaatattt tatacttaca  
1740  
aaaatctaga aatggagagg gaactgtttt gaataaggat ttaaaatacc tgcacaagga  
1800  
tagagagaaa ctatgtgact cattctgtga aaagacttct tgcagttgtg agttatttag  
1860  
aaatgatcaa aatttgtaat taggctaata catttagtga ttctaataat tttgtactca  
1920  
cagagaacta attgactaaa caacttgaac gctagtgggt tgtccttaga caatctgtct  
1980  
ttgaatttaa agtctttatc gctaagacct tgactttaaa tttttcatca ctacaacctt  
2040



gaatttaatt tcaggtcttc aacatgatga ccttggattt aatttaaagt cttcaacact  
 2100  
 atgcgcttta tcatattatt cacagatgca tttttgaaat gtagtatgta aaagtatgta  
 2160  
 acgtgctggt tattaacaaa agattgttca caacatctca tgtagtttaa atttgtaa  
 2220  
 actgcttctg tttgtttct cctttataca cttgactgtc tttgtgataa gtgacatgaa  
 2280  
 ttttatgtta ggattaagta tgttttctg aaacttggat ttttttgta attatataat  
 2340  
 tgagagttaa gaatgaaatc cttcaagtgt taaaaactca cattttaaaa gcaaattttg  
 2400  
 gttccaaaaa aaaa  
 2414

<210> 5496

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5496

Met	Leu	Trp	Lys	Arg	Arg	Leu	Gly	Cys	Lys	Phe	Pro	Gly	Arg	Leu	Ser
1			5						10					15	
Met	Phe	Ile	Pro	Asn	Ser	Gln	Trp	Thr	Glu	Val	Ser	Trp	Phe	Leu	Gly
			20					25					30		
Leu	Leu	Gly	Ser	Met	Ala	Leu	Ser	Asn	His	Tyr	Arg	Ser	Glu	Asp	Leu
		35						40				45			
Leu	Asp	Val	Asp	Thr	Ala	Ala	Gly	Gly	Phe	Gln	Gln	Arg	Gln	Gly	Leu
	50					55					60				
Lys	Tyr	Cys	Leu	Pro	Leu	Thr	Phe	Cys	Ile	His	Thr	Gly	Leu	Ser	Gln
65					70					75				80	
Tyr	Ile	Ala	Val	Glu	Ala	Ala	Glu	Gly	Arg	Asn	Lys	Asn	Glu	Val	Phe
			85						90					95	
Tyr	Gln	Cys	Pro	Asp	Gln	Met	Ala	Arg	Asn	Pro	Ala	Ala	Ile	Asp	Met
			100					105					110		
Phe	Ile	Ile	Gly	Ala	Thr	Phe	Thr	Asp	Trp	Phe	Thr	Ser	Tyr	Val	Lys
			115				120					125			
Asn	Val	Val	Ser	Gly	Gly	Phe	Pro	Ile	Ile	Arg	Asp	Gln	Ile	Phe	Arg
	130				135						140				
Tyr	Val	His	Asp	Pro	Glu	Cys	Val	Ala	Thr	Thr	Gly	Asp	Ile	Thr	Val
145					150					155				160	
Ser	Val	Ser	Thr	Ser	Phe	Leu	Pro	Glu	Leu	Ser	Ser	Val	His	Pro	Pro
			165						170					175	
His	Tyr	Phe	Phe	Thr	Tyr	Arg	Ile	Arg	Ile	Glu	Met	Ser	Lys	Asp	Ala
			180					185					190		
Leu	Pro	Glu	Lys	Ala	Cys	Gln	Leu	Asp	Ser	Arg	Tyr	Trp	Arg	Ile	Thr
		195				200						205			
Asn	Ala	Lys	Gly	Asp	Val	Glu	Val	Gln	Gly	Pro	Gly	Val	Val	Gly	
	210					215					220				
Glu	Phe	Pro	Ile	Ile	Ser	Pro	Gly	Arg	Val	Tyr	Glu	Tyr	Thr	Ser	Cys
225					230					235				240	
Thr	Thr	Phe	Ser	Thr	Thr	Ser	Gly	Tyr	Met	Glu	Gly	Tyr	Tyr	Thr	Phe
				245					250					255	
His	Phe	Leu	Tyr	Phe	Lys	Asp	Lys	Ile	Phe	Asn	Val	Ala	Ile	Pro	Arg

	260		265		270										
Phe	His	Met	Ala	Cys	Pro	Thr	Phe	Arg	Val	Ser	Ile	Ala	Arg	Leu	Glu
	275						280					285			
Met	Gly	Pro	Asp	Glu	Tyr	Glu	Glu	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu
	290					295				300					
Glu	Glu	Glu	Asp	Glu	Asp	Asp	Asp	Ser	Ala	Asp	Met	Asp	Glu	Ser	Asp
305					310					315				320	
Glu	Asp	Asp	Glu	Glu	Glu	Arg	Arg	Arg	Arg	Val	Phe	Asp	Val	Pro	Ile
			325					330					335		
Arg	Arg	Arg	Arg	Cys	Ser	Arg	Leu	Phe							
	340						345								

&lt;210&gt; 5497

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5497

caccgaggaag aatgtggaag gatctcccat tggccggttg gggcaaaagc ctgaggcaat  
 60  
 ctttcatccc cttttgccaa ggcgagactt tcccagtgac ggtgatgtag ttggccactc  
 120  
 tgactatggg tggactcggg tgtagacctc tgaagctgag atcacacgaa aacctggcct  
 180  
 ccccgccatg tagctgttgg agagtagaaa aatagagcac gcctgatgtt tctaaatgag  
 240  
 aagactttca atagtaatga agaattccatg gcactctcct caccctcaaa cacatggcag  
 300  
 tcattcacat acaggcccca aagtcactgt tagtgctgca gtggctcctg tggacattgg  
 360  
 aaagcccgga gagggcgtgg aagaaatcag ctggcccccg gcaggttctc tggggttttg  
 420  
 tgcccaaggc tcttgagacc ctaaaaactt tcaaaagtta actccccacg tccccatcct  
 480  
 gcttgggttt ctggactttt ctgaggcacc ggcagagggg tctcgttgct cccttgagtg  
 540  
 taggggcagc cctttaacct ggctccttga gtccctgctt tttctgcttc tgttgccctc  
 600  
 ttctcgtctt tcctctctct caatatctcc ctctctttgt cctccccag ttctgacct  
 660  
 ggccatcccc ggggtgccctt gaccagcccc gtgtctcttc aggggtgtcc agcaccagcc  
 720  
 tggcacagag tggggctcag ttagagtatg tgggatgttg gtttcgccag gtgagtgaat  
 780  
 gaaaggactc gaccaccaca gctgagccac tagctgggac atgcgaagag ttctaggtgc  
 840  
 aaaggctgga ggggtgaatt catttttgag aggtgtgtga gcagcttccg acccctgcc  
 900  
 catttgaacg ggggccttgc tggctcgcgc cctgcattca cccgcgcggc catcccgta  
 960  
 tccaacagtt gatcctaact gagcacgccc acggccctgg tctggcctgg gcaccggcga  
 1020  
 ccgtagccca tcccttgatg gcctctgtgt ccccg  
 1056

&lt;210&gt; 5498

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5498

```

Met Gly Gln Gly Ser Glu Ala Ala His Thr Pro Leu Lys Asn Glu Phe
 1             5             10             15
His Pro Pro Ala Phe Ala Pro Arg Thr Leu Arg Met Ala Gln Leu Val
      20             25             30
Ala Gln Leu Trp Trp Ser Ser Pro Phe Ile His Ser Pro Gly Glu Thr
      35             40             45
Asn Ile Pro His Thr Leu Thr Glu Pro His Ser Val Pro Gly Trp Cys
 50             55             60
Trp Asp Thr Leu Arg Arg His Gly Ala Gly Gln Gly His Pro Gly Met
65             70             75             80
Ala Arg Ser Gly Thr Gly Glu Gly Gln Arg Glu Gly Asp Ile Glu Arg
      85             90             95
Glu Glu Asp Glu Glu Glu Gly Asn Arg Ser Arg Lys Ser Arg Asp Ser
      100             105             110
Arg Ser Gln Val Lys Gly Leu Pro Leu His Ser Arg Glu Gln Arg Asp
      115             120             125
Pro Ser Ala Gly Ala Ser Glu Lys Ser Arg Asn Pro Ser Arg Met Gly
      130             135             140
Thr Trp Gly Val Asn Phe
145             150

```

&lt;210&gt; 5499

&lt;211&gt; 1918

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5499

```

ngctagccct gtatctgtct gagcagtggg atgtgccagg aaagaaggag caaccactga
60
ctgatgaacc ttgcccagtc tcccttccaa gagggatgcc agagccttct gtctttgggc
120
tgcctctgcc cttcgtagat tctctgctgg gcctttggaa ctaacacagc aacttccagg
180
gtctcatggt gaagacttta tggagcatcc tggccagaac aagccaagga gccaaagacg
240
gagggacaca cggacaaaca acagacagaa gacgtactgg ccgctggact ccgctgcctc
300
ccccatctcc ccgccatctg cgccccgagg atgagcccag ccttcagggc catggatgtg
360
gagccccgcg ccaaaggcgt ccttctggag ccctttgtcc accaggtcgg ggggcactca
420
tgcgtgetcc gtttcaatga gacaacctg tgcaagcccc tggccccaaag ggaacatcag
480
ttctacgaga ccttccttgc tgagatgcgc aaattcactc ccagtagaaa aggtgtggta
540
tctgtgcgct ttgaagaaga tgaagacagg aacttgtgtc taatagcata tccattgaaa
600

```

ggggaccatg gaattgtgga cattgcacat aattcagact gtgaaccaa aagtaagctc  
660  
ctaaggtgga caacaacaa aaaacatcat gtcttagaaa cagaaaagac ccctaaggac  
720  
tgggtgcgtc agcacgtaa agaggagaaa atgaagagcc ataagttaga agaagaattt  
780  
gagtggctaa agaaatctga agtcttgtac tacactgtag agaagaaggg gaatataagt  
840  
tcccagctta aacactataa cccttggagc atgaaatgtc accagcaaca gttacagaga  
900  
atgaaggaga atgcaaagca tcggaaccag tacaaattta tcttactgga aaacctgact  
960  
tcccgtatg aggtgccttg tgccttgac ctcaagatgg gcacacgaca acatggtgat  
1020  
gatgcttcag aggagaaggc agccaaccag atccgaaaat gtcagcagag cacatctgca  
1080  
gtcattggtg tgncgtgtg tggcatgcag gtgtaccaag caggcagtgg gcagctcatg  
1140  
ttcatgaaca agtaccatgg acggaagcta tcggtgcagg gcttcaagga ggcacttttc  
1200  
cagttcttcc acaatgggcg gtacctgccc cgtgaactcc tgggccttgt gctcaagaag  
1260  
ctgactgagc tcaaggcagt gttggagcga caggagtcct accgcttcta ctcaagctcc  
1320  
ctgctggtca tttatgatgg caaggagcgg ccggaagtgg tcctggactc agatgctgag  
1380  
gatttggagg acctgtcaga ggaatcagct gatgagtctg ctggtgccta tgcctacaaa  
1440  
cccacggcg ccagctctgt agatgtgccc atgatcgact ttgcacacac cacctgcagg  
1500  
ctgtatggcg aggacaccgt ggtgcatgag ggccaggatg ctggctatat cttcgggctc  
1560  
cagagcctga tagacattgt cacagagata agtgaggaga gtggggagtg agcttgctag  
1620  
ctgctccagt acttgagagc gactctgtgt ccagggcaca gctgtgctgc gtcaggagg  
1680  
aagccagtat ggccagggtg tggtcctgc agcctggagc tgatgtgcag tggcctctgt  
1740  
gagccccagc ctgagccagt cccagctgtg cttggagtct ttatttattt taactatttc  
1800  
ttcaacattc cacatttgat gatgatacct ctttcttccc tgagtgtata tgttctaata  
1860  
caaatctttt tgtttattgt aaaaaaaaaa aaaaaaaaaa aaagaaaaac tcgaaaa  
1918

&lt;210&gt; 5500

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5500

Met	Ser	Pro	Ala	Phe	Arg	Ala	Met	Asp	Val	Glu	Pro	Arg	Ala	Lys	Gly
1				5					10					15	
Val	Leu	Leu	Glu	Pro	Phe	Val	His	Gln	Val	Gly	Gly	His	Ser	Cys	Val

20 25 30  
 Leu Arg Phe Asn Glu Thr Thr Leu Cys Lys Pro Leu Val Pro Arg Glu  
 35 40 45  
 His Gln Phe Tyr Glu Thr Leu Pro Ala Glu Met Arg Lys Phe Thr Pro  
 50 55 60  
 Gln Tyr Lys Gly Val Val Ser Val Arg Phe Glu Glu Asp Glu Asp Arg  
 65 70 75 80  
 Asn Leu Cys Leu Ile Ala Tyr Pro Leu Lys Gly Asp His Gly Ile Val  
 85 90 95  
 Asp Ile Ala His Asn Ser Asp Cys Glu Pro Lys Ser Lys Leu Leu Arg  
 100 105 110  
 Trp Thr Thr Asn Lys Lys His His Val Leu Glu Thr Glu Lys Thr Pro  
 115 120 125  
 Lys Asp Trp Val Arg Gln His Arg Lys Glu Glu Lys Met Lys Ser His  
 130 135 140  
 Lys Leu Glu Glu Glu Phe Glu Trp Leu Lys Lys Ser Glu Val Leu Tyr  
 145 150 155 160  
 Tyr Thr Val Glu Lys Lys Gly Asn Ile Ser Ser Gln Leu Lys His Tyr  
 165 170 175  
 Asn Pro Trp Ser Met Lys Cys His Gln Gln Gln Leu Gln Arg Met Lys  
 180 185 190  
 Glu Asn Ala Lys His Arg Asn Gln Tyr Lys Phe Ile Leu Leu Glu Asn  
 195 200 205  
 Leu Thr Ser Arg Tyr Glu Val Pro Cys Val Leu Asp Leu Lys Met Gly  
 210 215 220  
 Thr Arg Gln His Gly Asp Asp Ala Ser Glu Glu Lys Ala Ala Asn Gln  
 225 230 235 240  
 Ile Arg Lys Cys Gln Ser Thr Ser Ala Val Ile Gly Val Xaa Val  
 245 250 255  
 Cys Gly Met Gln Val Tyr Gln Ala Gly Ser Gly Gln Leu Met Phe Met  
 260 265 270  
 Asn Lys Tyr His Gly Arg Lys Leu Ser Val Gln Gly Phe Lys Glu Ala  
 275 280 285  
 Leu Phe Gln Phe Phe His Asn Gly Arg Tyr Leu Arg Arg Glu Leu Leu  
 290 295 300  
 Gly Pro Val Leu Lys Lys Leu Thr Glu Leu Lys Ala Val Leu Glu Arg  
 305 310 315 320  
 Gln Glu Ser Tyr Arg Phe Tyr Ser Ser Ser Leu Leu Val Ile Tyr Asp  
 325 330 335  
 Gly Lys Glu Arg Pro Glu Val Val Leu Asp Ser Asp Ala Glu Asp Leu  
 340 345 350  
 Glu Asp Leu Ser Glu Glu Ser Ala Asp Glu Ser Ala Gly Ala Tyr Ala  
 355 360 365  
 Tyr Lys Pro Ile Gly Ala Ser Ser Val Asp Val Arg Met Ile Asp Phe  
 370 375 380  
 Ala His Thr Thr Cys Arg Leu Tyr Gly Glu Asp Thr Val Val His Glu  
 385 390 395 400  
 Gly Gln Asp Ala Gly Tyr Ile Phe Gly Leu Gln Ser Leu Ile Asp Ile  
 405 410 415  
 Val Thr Glu Ile Ser Glu Glu Ser Gly Glu  
 420 425

&lt;210&gt; 5501

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5501

attcggcacg aggtgagtcg gtggcaggaa cgtgggctct agactgtgca ttcaggctct  
 60  
 cctacttggc agaatgatct tggggaaacg acttcacatg aacttcagat atttcacatg  
 120  
 tgaagcgggg acaaaacat gcagctcaga ggtccctgtg ggggctgggg gagctgccct  
 180  
 gcaggtcttg gcacatgcac agcaggctcc ccatagcttt gtcaccacaa agggcactgt  
 240  
 tctattcaca gcacctcctg cttctgcctg gcaactgtgt ctccctgtgc tatatttaat  
 300  
 tccaccagca aagctggcga ggcaggggccc agccctgaag gagatctcct tgctgaccc  
 360  
 ctggacctgg aaatggaggc ttcattgtgcc cgccttggcg gcttaagcct gctgctttgg  
 420  
 cagtgccatg ggtgagccga gcagctgtga ggtgggtggg gcagggtgt agcccacgcc  
 480  
 ggggtctatt ccaggtctta ggggctggtg ctcacccca ccccagcga cttccgtcct  
 540  
 acctggcatg ctgcagcct ctgccggc  
 568

&lt;210&gt; 5502

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5502

Met	Ile	Leu	Gly	Lys	Arg	Leu	His	Leu	Asn	Phe	Arg	Tyr	Phe	Thr	Cys
1				5					10					15	
Glu	Ala	Gly	Thr	Lys	Pro	Cys	Ser	Ser	Glu	Val	Pro	Val	Gly	Ala	Gly
			20					25					30		
Gly	Ala	Ala	Leu	Gln	Val	Leu	Ala	His	Ala	Gln	Gln	Ala	Pro	His	Ser
		35					40					45			
Phe	Val	Thr	Thr	Lys	Gly	Thr	Val	Leu	Phe	Thr	Ala	Pro	Pro	Ala	Ser
	50					55					60				
Ala	Trp	Gln	Leu	Cys	Leu	Pro	Val	Leu	Tyr	Leu	Ile	Pro	Pro	Ala	Lys
65				70					75					80	
Leu	Ala	Arg	Gln	Gly	Pro	Ala	Leu	Lys	Glu	Ile	Ser	Leu	Pro	Asp	Pro
			85					90					95		
Trp	Thr	Trp	Lys	Trp	Arg	Leu	His	Val	Pro	Ala	Leu	Ala	Ala		
			100					105					110		

&lt;210&gt; 5503

&lt;211&gt; 1679

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5503

tgtctgggaa aaggggaactc acaaggggtg agtaccacca aattaggaga taccatgagc  
 60

taacgccgctc tcagaattgc ataaatttgt ctacattttt caaagaagtt gggttatctg  
120  
atttaatcct cacaatagtc aagctaggaa ggtaagtgtg gaattattac cccatttgat  
180  
aggtagacaa attaaagctt aagatcaaac cgtttgcaaa gcaggaagca gcacttcctc  
240  
ttgggtccagt tcttccttct ccctgggtgct aaggtcagtg gatgttggtc cccacagggc  
300  
cagaaagctg gagagaagcc cctgggtgca ggacccgggg aggaggaact gctccggggc  
360  
tcagccctc atgctcagga cactcagagt gaggaactgc caccctcctg caccatctca  
420  
ggagagaaga agccgccagc agtctctgga gaagccaccg gggtgatgc tgggagactg  
480  
tgcccgcccc cccgtccag ggctccccac aaagacagaa ctctagcccg ctccaggccc  
540  
cagactcagg gggaagattg ttccctccca gtgggagagg tgaagatagg aaagaggctc  
600  
tattctccag cccccgggaa gcagaaaaag cctaattgcca tgggtctggc cccaacatca  
660  
tctccgggtg cccctaactc agcccggtgc acacacaacc cagtgcctg tgggtcaggc  
720  
cgggggccct gccacctggc caatctctc agtacattgg cgcagagcaa ccaaacaga  
780  
gaccacaagc agggggcccc ggaagtgacc tgccaaatta ggaaaaagac acgaacccta  
840  
taccgctcag atcagctgga ggagctagag aagatattcc aagaagacca ctatcctgac  
900  
agtgataaac gccgagagat tgccagacg gtgggggtga cccccagcg catcatggta  
960  
aagggggccg gctcactggt ggcagggtg agtggcggag ggcccaccat tgaaacactc  
1020  
gaattgcaga gtgagcgctc agcggtagcc tgggtgtggt tccagaatcg ccgggccaag  
1080  
tggcgaaaaa tggagaaact gaatgggaaa gaaagcaagg acaatcctgc agccccctggc  
1140  
cctgccagca gtcaatgcag ctctgcagct gagatcctac ctgctgtgcc catggagcca  
1200  
aagcctgacc ctttcctca ggagtccct ctggatacct ttccagagcc ccccatgctg  
1260  
ctgacttctg accagacttt ggccccacc caaccagtg aggggtgctca gaggggtggtg  
1320  
acccccccac tcttcagccc cccacctgtg cgaagggccg atcttccttt ccccttggc  
1380  
cctgtccaca ccccccaact gatgccactg ctgatggatg ttgctggcag tgacagcagc  
1440  
cacaaggacg gcccctgtgg gtctggggg acaaggtaag gaacctacgg gggtaggtca  
1500  
ctctagttat ctgggtgggg gtagggggt gtagatggag agaagataga cacagagagg  
1560  
agagggttaa ctgagaggag cacagagtgg tacaggagat ggggatgaaa gggataaggg  
1620  
gatctgggga atgacctagg ggatcacagc aatagagcag aaacaagggt aagatgcta  
1679

<210> 5504  
 <211> 392  
 <212> PRT  
 <213> Homo sapiens

<400> 5504

```

Gln Lys Ala Gly Glu Lys Pro Leu Ala Ala Gly Pro Gly Glu Glu Glu
 1           5           10           15
Leu Leu Arg Gly Ser Ala Pro His Ala Gln Asp Thr Gln Ser Glu Glu
 20           25           30
Leu Pro Pro Ser Cys Thr Ile Ser Gly Glu Lys Lys Pro Pro Ala Val
 35           40           45
Ser Gly Glu Ala Thr Gly Ala Asp Ala Gly Arg Leu Cys Pro Pro Pro
 50           55           60
Arg Ser Arg Ala Pro His Lys Asp Arg Thr Leu Ala Arg Ser Arg Pro
 65           70           75           80
Gln Thr Gln Gly Glu Asp Cys Ser Leu Pro Val Gly Glu Val Lys Ile
 85           90           95
Gly Lys Arg Ser Tyr Ser Pro Ala Pro Gly Lys Gln Lys Lys Pro Asn
 100          105          110
Ala Met Gly Leu Ala Pro Thr Ser Ser Pro Gly Ala Pro Asn Ser Ala
 115          120          125
Arg Ala Thr His Asn Pro Val Pro Cys Gly Ser Gly Arg Gly Pro Cys
 130          135          140
His Leu Ala Asn Leu Leu Ser Thr Leu Ala Gln Ser Asn Gln Asn Arg
 145          150          155          160
Asp His Lys Gln Gly Pro Pro Glu Val Thr Cys Gln Ile Arg Lys Lys
 165          170          175
Thr Arg Thr Leu Tyr Arg Ser Asp Gln Leu Glu Glu Leu Glu Lys Ile
 180          185          190
Phe Gln Glu Asp His Tyr Pro Asp Ser Asp Lys Arg Arg Glu Ile Ala
 195          200          205
Gln Thr Val Gly Val Thr Pro Gln Arg Ile Met Val Lys Gly Ala Gly
 210          215          220
Ser Leu Val Ala Gly Trp Ser Gly Gly Gly Pro Thr Ile Glu Thr Leu
 225          230          235          240
Glu Leu Gln Ser Glu Arg Ser Ala Val Ala Trp Val Trp Phe Gln Asn
 245          250          255
Arg Arg Ala Lys Trp Arg Lys Met Glu Lys Leu Asn Gly Lys Glu Ser
 260          265          270
Lys Asp Asn Pro Ala Ala Pro Gly Pro Ala Ser Ser Gln Cys Ser Ser
 275          280          285
Ala Ala Glu Ile Leu Pro Ala Val Pro Met Glu Pro Lys Pro Asp Pro
 290          295          300
Phe Pro Gln Glu Ser Pro Leu Asp Thr Phe Pro Glu Pro Pro Met Leu
 305          310          315          320
Leu Thr Ser Asp Gln Thr Leu Ala Pro Thr Gln Pro Ser Glu Gly Ala
 325          330          335
Gln Arg Val Val Thr Pro Pro Leu Phe Ser Pro Pro Pro Val Arg Arg
 340          345          350
Ala Asp Leu Pro Phe Pro Leu Gly Pro Val His Thr Pro Gln Leu Met
 355          360          365
Pro Leu Leu Met Asp Val Ala Gly Ser Asp Ser Ser His Lys Asp Gly

```



370 375 380  
Pro Cys Gly Ser Trp Gly Thr Arg  
385 390

<210> 5505  
<211> 1099  
<212> DNA  
<213> Homo sapiens

<400> 5505  
aagcttgggc ggcccagcgg atcgtgccgc ggcggccgag cgcagctaca ggaggggtgc  
60  
cagaagccac aagccatggc tgtggggaac atcaacgagc tgcccagaaa catcctgctg  
120  
gagctgttca cgcacgtgcc cgcccgcag ctgctgctga actgccgcct ggtctgcagc  
180  
ctctggcggg acctcatcga cctcgtgacc ctctggaac gcaagtgcct gcgagagggc  
240  
ttcatcactg aggactggga ccagcccgctg gccgactgga agatcttcta cttcttacgg  
300  
agcctgcaca ggaacctcct gcacaaccgc tgcgctgaag aggggttcga gttctggagc  
360  
ctggatgtga atggaggcga tgagtgaag gtggaggatc tctctcgaga ccagaggaag  
420  
gaattcccca atgaccaggt caagaaatac ttcgttactt catattacac ctgcctcaag  
480  
tcccaggtgg tggacctcaa ggccgaaggg tattgggagg agctactaga cacattccgg  
540  
ccggacatcg tggttaagga ctggtttgcg gccagagccg actgtggctg cacctaccaa  
600  
ctcaaagtgc agctcctgtc ggctgactac ttcgtgttgg cctccttcga gccagaccgc  
660  
gcgaccatcc agcagaagag cgatgccaag tggaggaggg tctccacac attctccaac  
720  
taccgccccg gcgtccgcta catctggttt cagcacggcg gcgtggacac tcattactgg  
780  
gccggctggt acggcccgag ggtcaccaac agcagcatca ccacggggcc cccgctgccc  
840  
tgacaccccc tgagccccc tctgctgaac cctgactggt aaacaactgc tgtcagaaaa  
900  
gggctgggct tgggaagggg aggtggaggc caggtgtccc cagacctcta acccttgccc  
960  
ctagcgcct cttctttgtg gacccctca gtgtgggcag cctcgcctg ctggggtcgg  
1020  
gccagctctc cccgaaaggc cttgacctga atgatggccg gggaagcctg cgtgtgcccc  
1080  
tttcagagac ggagcacct  
1099

<210> 5506  
<211> 280  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 5506

Lys Leu Gly Arg Pro Ser Gly Ser Cys Arg Gly Gly Arg Ala Gln Leu  
 1 5 10 15  
 Gln Glu Gly Val Gln Lys Pro Gln Ala Met Ala Val Gly Asn Ile Asn  
 20 25 30  
 Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala  
 35 40 45  
 Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp  
 50 55 60  
 Leu Ile Asp Leu Val Thr Leu Trp Lys Arg Lys Cys Leu Arg Glu Gly  
 65 70 75 80  
 Phe Ile Thr Glu Asp Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe  
 85 90 95  
 Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu His Asn Pro Cys Ala  
 100 105 110  
 Glu Glu Gly Phe Glu Phe Trp Ser Leu Asp Val Asn Gly Gly Asp Glu  
 115 120 125  
 Trp Lys Val Glu Asp Leu Ser Arg Asp Gln Arg Lys Glu Phe Pro Asn  
 130 135 140  
 Asp Gln Val Lys Lys Tyr Phe Val Thr Ser Tyr Tyr Thr Cys Leu Lys  
 145 150 155 160  
 Ser Gln Val Val Asp Leu Lys Ala Glu Gly Tyr Trp Glu Glu Leu Leu  
 165 170 175  
 Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg  
 180 185 190  
 Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln Leu Leu Ser Ala  
 195 200 205  
 Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Asp Pro Ala Thr Ile Gln  
 210 215 220  
 Gln Lys Ser Asp Ala Lys Trp Arg Glu Val Ser His Thr Phe Ser Asn  
 225 230 235 240  
 Tyr Pro Pro Gly Val Arg Tyr Ile Trp Phe Gln His Gly Gly Val Asp  
 245 250 255  
 Thr His Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser  
 260 265 270  
 Ile Thr Ile Gly Pro Pro Leu Pro  
 275 280

&lt;210&gt; 5507

&lt;211&gt; 1658

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5507

nttagaaa gccaaaggaat tgagttaaatt ccaccagaga agatggctct tgatccttac  
 60  
 actgaactcc gaaaacagcc tcttcgtaag tatgtcaccc catcagactt tgatcaactc  
 120  
 aagcaatttc tcacctttga caaacaggtc cttcgattct atgcaatctg ggatgataca  
 180  
 gacagcatgt atggtgaatg tcggacctac atcattcatt actatcttat ggatgatacg  
 240  
 gtggaaattc gagaggtcca cgaacggaat gatgggagag atcctttccc actcctaagt  
 300

aaccgccagc gtgtgcccaa agttttggtg gaaaatgcaa agaacttccc tcagtgtgtg  
360  
ctagaaatct ctgaccaaga agtggttgga tggatactg ctaaagactt cattgttggg  
420  
aagtcactca ctatccttgg gagaactttc ttcatttatg atttgtatcc atttactcga  
480  
cggattaca aagagaagtt tggaatcact gatttaccac gtattgatgt gagcaagcgg  
540  
gaaccacctc cagtaaaaca ggagttgcct ccttataacg gttttggact agtgaagat  
600  
tctgtcaga attgttttgc tctcattcca aaagctccaa aaaaagacgt tattaanaatg  
660  
ctggtgaatg ataacaaggt gcttcgttat ttggtgtac tggaaatccc catcccagaa  
720  
gacaaagacc gcagatttgt cttctcttac tttctagcta ccgacatgat cagtatcttt  
780  
gagcctctg ttcgcaattc tggatcatt gggggcaagt accttggcag gactaaagtt  
840  
gttaaaccat actctacagt ggacaaccct gtctactatg gcccagtgat cttcttcatt  
900  
ggtgtgtgta ttgaagtgtt tggtcaccgg ttcacatcc ttgatacaga cgagtatgtt  
960  
ttgaaatata tggagagcaa cgctgcccag tattcaccag aagcactcgc gtcaattcag  
1020  
aaccatgtcc gaaagcgaga agcgctgtct ccagaagcag aaagcaagca aactgaaaag  
1080  
gatccaggcg tgcaggaatt ggaagcatta atagacacaa ttcagaagca actgaaagat  
1140  
cactcatgca aagacaacat tcgtgaggca tttcaaattt atgacaagga agcttcagga  
1200  
tatgtggaca gagacatggt ctttaaaatc tgtgaatcgc ttaacgtccc agtggatgac  
1260  
tccttgggta aggagttaat caggatgtgc tctcatggag aaggcaaat taactactat  
1320  
aactttgttc gtgctttctc aaactgacct gctgatgaga aaatgcaaga caatttttga  
1380  
tactggaact atgctttgaa atacacctta cactcttcat agaggcattt acaggggtcc  
1440  
tgaagtttta tttctgtttt ggttcttatt tcaactctac tgaagtcgaa actaaattgg  
1500  
atctaatagg atctaagatt ggtgccttat ttaggtgat aggggtatag caatgtctaa  
1560  
ttttgtgtgt caaattgact tggccacagg gggcccaaat atttcctttc tttcttttta  
1620  
aaaaaataaa tttttttgga gatgggaaaa aaaaaaaa  
1658

&lt;210&gt; 5508

&lt;211&gt; 448

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5508

Xaa Leu Glu Ser Gln Gly Ile Glu Leu Asn Pro Pro Glu Lys Met Ala

1	5	10	15
Leu Asp Pro Tyr Thr Glu Leu Arg Lys Gln Pro Leu Arg Lys Tyr Val			
20	25	30	
Thr Pro Ser Asp Phe Asp Gln Leu Lys Gln Phe Leu Thr Phe Asp Lys			
35	40	45	
Gln Val Leu Arg Phe Tyr Ala Ile Trp Asp Asp Thr Asp Ser Met Tyr			
50	55	60	
Gly Glu Cys Arg Thr Tyr Ile Ile His Tyr Tyr Leu Met Asp Asp Thr			
65	70	75	80
Val Glu Ile Arg Glu Val His Glu Arg Asn Asp Gly Arg Asp Pro Phe			
85	90	95	
Pro Leu Leu Met Asn Arg Gln Arg Val Pro Lys Val Leu Val Glu Asn			
100	105	110	
Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln Glu Val			
115	120	125	
Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser Leu Thr			
130	135	140	
Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe Thr Arg			
145	150	155	160
Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg Ile Asp			
165	170	175	
Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro Pro Tyr			
180	185	190	
Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe Ala Leu			
195	200	205	
Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val Asn Asp			
210	215	220	
Asn Lys Val Leu Arg Tyr Leu Ala Val Leu Glu Ser Pro Ile Pro Glu			
225	230	235	240
Asp Lys Asp Arg Arg Phe Val Phe Ser Tyr Phe Leu Ala Thr Asp Met			
245	250	255	
Ile Ser Ile Phe Glu Pro Pro Val Arg Asn Ser Gly Ile Ile Gly Gly			
260	265	270	
Lys Tyr Leu Gly Arg Thr Lys Val Val Lys Pro Tyr Ser Thr Val Asp			
275	280	285	
Asn Pro Val Tyr Tyr Gly Pro Ser Asp Phe Phe Ile Gly Ala Val Ile			
290	295	300	
Glu Val Phe Gly His Arg Phe Ile Ile Leu Asp Thr Asp Glu Tyr Val			
305	310	315	320
Leu Lys Tyr Met Glu Ser Asn Ala Ala Gln Tyr Ser Pro Glu Ala Leu			
325	330	335	
Ala Ser Ile Gln Asn His Val Arg Lys Arg Glu Ala Pro Ala Pro Glu			
340	345	350	
Ala Glu Ser Lys Gln Thr Glu Lys Asp Pro Gly Val Gln Glu Leu Glu			
355	360	365	
Ala Leu Ile Asp Thr Ile Gln Lys Gln Leu Lys Asp His Ser Cys Lys			
370	375	380	
Asp Asn Ile Arg Glu Ala Phe Gln Ile Tyr Asp Lys Glu Ala Ser Gly			
385	390	395	400
Tyr Val Asp Arg Asp Met Phe Phe Lys Ile Cys Glu Ser Leu Asn Val			
405	410	415	
Pro Val Asp Asp Ser Leu Val Lys Glu Leu Ile Arg Met Cys Ser His			
420	425	430	
Gly Glu Gly Lys Ile Asn Tyr Tyr Asn Phe Val Arg Ala Phe Ser Asn			

435

440

445

&lt;210&gt; 5509

&lt;211&gt; 818

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5509

ccactgtgtg aagagaaatt aggggtgaccc aggcagtaca tcctactccc tggacccacc  
 60  
 aaggagagct gtatttgtgt ttcattggtt ctttaccaa taattctagc atcggaattg  
 120  
 ctatgtgaga ggaagtaagt atacacagcg taagaggtgt gataaccaag tcatagaaga  
 180  
 aatgttttga gaacatggaa tcatgtgaac ttattatgtg gtaagtacag ataccaggg  
 240  
 ctgtcagtct caccatcctt ttctacacat gtggatgctt caggactcca gcctttgagg  
 300  
 atgtggcttt caacttcacc ctacaggaaa ggtagtcaat gtggagaagc cttcagccag  
 360  
 attccaggtc ataacttgaa taagaaaacg cctcctggag taaagccacc tgaaagccat  
 420  
 gtgtgtggag aggtcggcgt gggctatcca tccactgaaa ggcacatcag agatcgctt  
 480  
 ggacgcaaac cctgtgaata tcaggaatgt agacagaagg catatacatg taagccatgt  
 540  
 gggaatgcct ttcgttttca ccaactcctt cacatacag aaaggcctca cagtggagaa  
 600  
 aacctctatg aatgttagga atttcagaaa acattcactt ccccccaaa cttcaaaga  
 660  
 tgtgaaaatg catagtggag atggacctta caaatgcaag gtgggtagga aaacctttga  
 720  
 ctctcccagt tcatttcgaa tacatggaag atctcattct ggagagaaac ccaatgtgtg  
 780  
 taggcactgt gggagcacct acaatcattt cagttttg  
 818

&lt;210&gt; 5510

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5510

Met	Trp	Leu	Ser	Thr	Ser	Pro	Tyr	Arg	Lys	Gly	Ser	Gln	Cys	Gly	Glu
1				5				10					15		
Ala	Phe	Ser	Gln	Ile	Pro	Gly	His	Asn	Leu	Asn	Lys	Lys	Thr	Pro	Pro
			20				25					30			
Gly	Val	Lys	Pro	Pro	Glu	Ser	His	Val	Cys	Gly	Glu	Val	Gly	Val	Gly
		35				40						45			
Tyr	Pro	Ser	Thr	Glu	Arg	His	Ile	Arg	Asp	Arg	Leu	Gly	Arg	Lys	Pro
		50			55					60					
Cys	Glu	Tyr	Gln	Glu	Cys	Arg	Gln	Lys	Ala	Tyr	Thr	Cys	Lys	Pro	Cys
65				70				75					80		
Gly	Asn	Ala	Phe	Arg	Phe	His	His	Ser	Phe	His	Ile	His	Glu	Arg	Pro

85 90 95  
 His Ser Gly Glu Asn Leu Tyr Glu Cys  
 100 105

<210> 5511  
 <211> 379  
 <212> DNA  
 <213> Homo sapiens

<400> 5511  
 tccggagtgt cacaggcctc agccacaagg ctttctgat tgggctccac atctgcagaa  
 60  
 ccttctcttg gaaaagaggg catcgtctca atcgcatagt cacacacatc ccttaactca  
 120  
 ctctgctgag ttgctgagag tctgtgttcc tctctccact tataggatgg gtcctcatct  
 180  
 tcttgagctt caagcccca ggcagagacc tggtgctcc tcatgggagc ctcagggata  
 240  
 atgctgaatt cctctatggc agagatggga ggagaggctc cacgctgggc ctctcagcc  
 300  
 tccatcaggg ctgaatcctg gtcggtgtca catgctgctt cgccccagc gtccctcca  
 360  
 ggtcccggcg ccggccgcg  
 379

<210> 5512  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 5512  
 Met Glu Ala Glu Glu Ala Gln Arg Gly Ala Ser Pro Pro Ile Ser Ala  
 1 5 10 15  
 Ile Glu Glu Phe Ser Ile Ile Pro Glu Ala Pro Met Arg Ser Ser Gln  
 20 25 30  
 Val Ser Ala Leu Gly Leu Glu Ala Gln Glu Asp Glu Asp Pro Ser Tyr  
 35 40 45  
 Lys Trp Arg Glu Glu His Arg Leu Ser Ala Thr Gln Gln Ser Glu Leu  
 50 55 60  
 Arg Asp Val Cys Asp Tyr Ala Ile Glu Thr Met Pro Ser Phe Pro Lys  
 65 70 75 80  
 Glu Gly Ser Ala Asp Val Glu Pro Asn Gln Glu Ser Leu Val Ala Glu  
 85 90 95  
 Ala Cys Asp Thr Pro  
 100

<210> 5513  
 <211> 837  
 <212> DNA  
 <213> Homo sapiens

<400> 5513  
 nnaagcttga gttcctctgt ccaaggccag ggacctgtga ccatggaagc agagagaagc  
 60

aaggccacag ccgcggccct gggcagtttc ccggcagggtg gcccggccga gctgtcgctg  
120  
agactcgggg agccattgac catcgtctct gaggatggag actggtggac ggtgctgtct  
180  
gaagtctcag gcagagagta taacatcccc agcgtccacg tggccaaagt ctcccatggg  
240  
tggctgtatg agggcctgag cagggagaaa gcagaggacc tgctgttgtt acctgggaac  
300  
cctggagggg ccttcctcat ccgggagagc cagaccagga gaggctctta ctctctgtca  
360  
gtccgcctca gccgccctgc atcctgggac cggatcagac actacaggat ccaactgcctt  
420  
gacaatggct ggctgtacat ctcaaccgcg ctcaccttcc cctcactcca ggcctgggtg  
480  
gaccattact ctgagctggc ggatgacatc tgctgcctac tcaaggagcc ctgtgtcctg  
540  
cagagggctg gcccgctccc tggcaaggat atacccctac ctgtgactgt gcagaggaca  
600  
ccactcaact ggaaagagct ggacagctcc ctctgtttt ctgaagctgc cacaggggag  
660  
gagtctcttc tcagtggagg tctccgggag tccctcagct tctacatcag cctgaatgac  
720  
gaggctgtct ctttggatga tgcctaggcc caaaggagag gccaaaaggg aaaccaaggc  
780  
tgcacaccta gaaccccaat tcagcctcct gggcacccca gaggcaaggc tgtgcac  
837

&lt;210&gt; 5514

&lt;211&gt; 248

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5514

Xaa	Ser	Leu	Ser	Ser	Ser	Val	Gln	Gly	Gln	Gly	Pro	Val	Thr	Met	Glu
1				5					10					15	
Ala	Glu	Arg	Ser	Lys	Ala	Thr	Ala	Ala	Ala	Leu	Gly	Ser	Phe	Pro	Ala
			20					25					30		
Gly	Gly	Pro	Ala	Glu	Leu	Ser	Leu	Arg	Leu	Gly	Glu	Pro	Leu	Thr	Ile
		35					40					45			
Val	Ser	Glu	Asp	Gly	Asp	Trp	Trp	Thr	Val	Leu	Ser	Glu	Val	Ser	Gly
	50					55				60					
Arg	Glu	Tyr	Asn	Ile	Pro	Ser	Val	His	Val	Ala	Lys	Val	Ser	His	Gly
65				70					75					80	
Trp	Leu	Tyr	Glu	Gly	Leu	Ser	Arg	Glu	Lys	Ala	Glu	Asp	Leu	Leu	Leu
			85					90					95		
Leu	Pro	Gly	Asn	Pro	Gly	Gly	Ala	Phe	Leu	Ile	Arg	Glu	Ser	Gln	Thr
		100					105					110			
Arg	Arg	Gly	Ser	Tyr	Ser	Leu	Ser	Val	Arg	Leu	Ser	Arg	Pro	Ala	Ser
	115					120						125			
Trp	Asp	Arg	Ile	Arg	His	Tyr	Arg	Ile	His	Cys	Leu	Asp	Asn	Gly	Trp
	130					135					140				
Leu	Tyr	Ile	Ser	Pro	Arg	Leu	Thr	Phe	Pro	Ser	Leu	Gln	Ala	Leu	Val
145				150					155					160	
Asp	His	Tyr	Ser	Glu	Leu	Ala	Asp	Asp	Ile	Cys	Cys	Leu	Leu	Lys	Glu

```

          165          170          175
Pro Cys Val Leu Gln Arg Ala Gly Pro Leu Pro Gly Lys Asp Ile Pro
          180          185          190
Leu Pro Val Thr Val Gln Arg Thr Pro Leu Asn Trp Lys Glu Leu Asp
          195          200          205
Ser Ser Leu Leu Phe Ser Glu Ala Ala Thr Gly Glu Glu Ser Leu Leu
          210          215          220
Ser Glu Gly Leu Arg Glu Ser Leu Ser Phe Tyr Ile Ser Leu Asn Asp
225          230          235          240
Glu Ala Val Ser Leu Asp Asp Ala
          245

```

&lt;210&gt; 5515

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5515

```

gtttgtacca acccctctc catccttgaa gcagtcattg cccactgcaa gaaaatgcaa
60
gaaaggatgt ccgcacagct ggctgctgct gagagcagac aaaagaagct ggaaatggag
120
aagcttcagc tacaagcct tgagcaagag cacaagaagc tggctgccc ccttgaggaa
180
gagcgtggca agaacaagca ggtggtcctg atgctggtca aagagtgcaa gcagctctca
240
agcaaagtca tagaggagc ccagaagctc gaagacgtaa tggccaaact ggcttcttct
300
ctttgtcacc agcacctgct tcatagtctc tctggagtgc caggaaacggg tcatatagat
360
taaattctcc ataccgttcc tggataaata cctccttctc gcgagcccg agggcctcga
420

```

&lt;210&gt; 5516

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5516

```

Val Cys Thr Asn Pro Leu Ser Ile Leu Glu Ala Val Met Ala His Cys
1          5          10          15
Lys Lys Met Gln Glu Arg Met Ser Ala Gln Leu Ala Ala Glu Ser
20          25          30
Arg Gln Lys Lys Leu Glu Met Glu Lys Leu Gln Leu Gln Ala Leu Glu
35          40          45
Gln Glu His Lys Lys Leu Ala Ala Arg Leu Glu Glu Glu Arg Gly Lys
50          55          60
Asn Lys Gln Val Val Leu Met Leu Val Lys Glu Cys Lys Gln Leu Ser
65          70          75          80
Ser Lys Val Ile Glu Glu Ala Gln Lys Leu Glu Asp Val Met Ala Lys
85          90          95
Leu Ala Ser Ser Leu Cys His Gln His Leu Leu His Ser Leu Ser Gly
100          105          110
Val Pro Gly Thr Gly His Ile Asp

```



115

120

<210> 5517  
 <211> 804  
 <212> DNA  
 <213> Homo sapiens

<400> 5517  
 nctgtatggc caaagcacia agggaaggat ccgcaattta cattcttgga gctatcatct  
 60  
 gtactgtact gttgtgatct actgattggc attggcatag tagtagggtc aagtgcaga  
 120  
 atccgtgccca gcagctccca gggttcagaag caattcaaga ccctgatgat agctctccag  
 180  
 caaccaacac atggtgacat ggtgattgtg ccaacttgtt gctcagttat atgcagggcc  
 240  
 agtgattggt ttaagtgaag accatgggtg agatcatttg tctttggtct aatagaattt  
 300  
 gagctagtag aatttgagtc tccagggaaa gagctacttg accaaattaa actagtagca  
 360  
 ggtagagcat gaatgcagc atattatacc atcaagatgt tcttagagca gtgtatggat  
 420  
 ggatcgattg tactgccatc agttgtgact gacgttgat tcaaggagaa agagaaactt  
 480  
 gtttagaaaag cactttgaaa gttttttgag tacgggggtg ccctgtatca ccccgttatg  
 540  
 gttgaacttt ctcttcaaaa attaccagac ttggcagcag tggcaaatta ttgggctaaa  
 600  
 agacttaatc agacatattc tgggttcaag gctcctaata taatacctgg tgcaaacatt  
 660  
 atacttcac tcattcagat ggttgcaccc tgccaggcat ccagtgggac tgggaatatg  
 720  
 gacacttgaa cattaacat cctgaagaat tttggaatga caggttaca gtgaacataa  
 780  
 tcagttctct atattaaaa aaaa  
 804

<210> 5518  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 5518  
 Xaa Val Trp Pro Lys His Lys Gly Lys Asp Pro Gln Phe Thr Phe Leu  
 1 5 10 15  
 Glu Leu Ser Ser Val Leu Tyr Cys Cys Asp Leu Leu Ile Gly Ile Gly  
 20 25 30  
 Ile Val Val Gly Ser Ser Asp Arg Ile Arg Ala Ser Ser Leu Gln Val  
 35 40 45  
 Gln Lys Gln Phe Lys Thr Leu Met Ile Ala Leu Gln Gln Pro Thr His  
 50 55 60  
 Gly Asp Met Val Ile Val Pro Thr Cys Cys Ser Val Ile Cys Arg Ala  
 65 70 75 80  
 Ser Asp Trp Phe Lys

85

<210> 5519  
 <211> 401  
 <212> DNA  
 <213> Homo sapiens

<400> 5519  
 ctccataaca tccattttcc tattatgagc agaggaaata aacatgcaga tggcttggtt  
 60  
 tccttcgcat aacttgtaga ggggtaggta gcataaaaga cagccggtct caagaagcaa  
 120  
 ccatgcgcct cactacttac catgttcctg cgggcattcc cctcccgaag ggagtctctg  
 180  
 aaaacaaaca cacacagaag ttggcgctgg gcaccacatt ctctcttga cctaaccatc  
 240  
 aggaatttgc tgtgccatct gttcataaaa cttagccagg cccagaaagc ttgtcccaac  
 300  
 cacatgctaa gagccaagca gatggaacag aagctcccc aagctgctgg ctcccactat  
 360  
 ggctgggatg aagcaagaac ctgggcccac acaggtgca a  
 401

<210> 5520  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 5520  
 Met Trp Leu Gly Gln Ala Phe Trp Ala Trp Leu Ser Phe Met Asn Arg  
 1 5 10 15  
 Trp His Ser Lys Phe Leu Met Val Arg Ser Arg Gly Glu Cys Gly Ala  
 20 25 30  
 Gln Arg Gln Leu Leu Cys Val Phe Val Phe Arg Asp Ser Leu Arg Glu  
 35 40 45  
 Gly Asn Ala Arg Arg Asn Met Val Ser Ser Glu Ala His Gly Cys Phe  
 50 55 60  
 Leu Arg Pro Ala Val Phe Tyr Ala Thr Tyr Pro Cys Thr Ser Tyr Ala  
 65 70 75 80  
 Lys Glu Thr Lys Pro Ser Ala Cys Leu Phe Pro Leu Leu Ile Ile Gly  
 85 90 95  
 Lys Trp Met Leu Trp  
 100

<210> 5521  
 <211> 2524  
 <212> DNA  
 <213> Homo sapiens

<400> 5521  
 ngggggagct cgcccgctgt ccgccagccc gcgggaggga ggagagaagc gaagcgtttc  
 60  
 cgcggttggc tactcagtgt cttggtctca agttgcctca ttgcggctgg cgttcccaat  
 120

acagacgcat cgtttctttt ttaatactcc ctaagaaagg gaataacctt caagctggcg  
180  
ggagcaatgg ttcacataaa gaaaggcgag ctgacccagg aggagaagga gctactggaa  
240  
gtcatcgga aaggctactgt ccaagaagct ggaacattat tatccagcaa gaatgttcgt  
300  
gtcaactgtt tggacgagaa tggaatgact cctctaagtc atgcagcata taaaggaaaa  
360  
ctcgatatgt gcaaattact actgcgacat ggagccgatg taaattgtca tcagcatgaa  
420  
catggataca cageccctcat gtttgctgca ctttctggta ataaagacat cacatgggta  
480  
atgttagagg ctggtgctga gacagatgtt gtcaactctg tgggaagaac agcagctcag  
540  
atggcagcct ttgtgggtca acatgattgt gtgaccataa tcaacaattt ctttctcga  
600  
gagagactgg attattacac taagccccag ggactggata aagagccaaa actgccccca  
660  
aagttggcag gcccgctgca caaaattatc accacaacga atcttcatcc tgtcaagatc  
720  
gtgatgcttg taaatgagaa tctctgctg acagaagaag cagccctgaa taaatgctac  
780  
agagtgatgg atttgatttg tgagaaatgt atgaagcaaa gagacatgaa tgaagtattg  
840  
gctatgaaga tgcattacat aagctgtatc ttccagaaat gcattaactt cttaaagat  
900  
ggagagaata aactggacac cttgatcaaa agcttgctaa aaggccgagc ttctgatggc  
960  
tttccagtgt atcaagaaaa gatcattaga gaaagtatca gaaaatttcc atactgtgaa  
1020  
gccacactcc tacagcagct ggtgcaagc atcgctccag ttgaaattgg ttctgatccc  
1080  
actgcattct ccgtccttac ccaagccatc actggccagg tgggttttgt ggatgtggaa  
1140  
ttttgacta cctgtggaga aaagggagca agtaaaagat gtccagtttg caaaatggta  
1200  
atatattgtg atcaaacctg ccagaaaaca cactggttta ctcataagaa aatctgtaag  
1260  
aatctgaagg acatttacga aaagcaacag ttggaggctg ccaaagaaaa gagacaagag  
1320  
gaaaaccacg gcaaacttga tgtcaattct aactgtgtta atgaagagca accagaggct  
1380  
gaagtaggta tctctcaaag ggattccaat cctgaagatt ccggggaagg aaagaaagaa  
1440  
tctcttgaaa gcgaagctga gttggaaggc ttacaggatg ctctgcagg gccacagggt  
1500  
tctgaggagt aaaagccaga gcaagtgccg gtgtggatgg tctcaccct gcaagaagct  
1560  
ggaaaactcc taggaatgca ttgtcctcac cttgttatac ctgcgtggca ccatggcagg  
1620  
attccacatt tcatagaata caggttttca agcaaacccc tggtgaccat gccctaattt  
1680  
cctattgatt tctgttctat gattgaatgg atattcctat ggaaaatttt ttgtttcaaa  
1740

atacaggaaa aacataccta ttacctttct gaggttggt ttccagcaat tgtttcaaag  
 1800  
 gaaaatagat ccccttaaag aaaaaataca ggctttaggg aacaaaggga caagcagaac  
 1860  
 aggtgtggaa gagagatttt caggaaggga aaaatttata gctacagagg gtagttagaa  
 1920  
 aaatcataac ttatatgtga ataaaataca tataagcagc atttacggta gtggcattct  
 1980  
 acttattaag atgcaatgaa atgaagaaag gctttatggt caaggacctt tgccatagtt  
 2040  
 cagctaattg tagttttata tagaaatgat cctgaacact ctgaacttga cgtagtcctg  
 2100  
 cggtgatatt ctatctgcag tatttgtacc tccagaatgg cagatccctc agcaggaaca  
 2160  
 aaggcatatt gacggttctc tcagcgtatg cattaaaaaa ggtacttctt gaaacttttg  
 2220  
 attcaataat gactaaacat actatgtaca caattactgt aaggctaatt cacgtgccat  
 2280  
 acgccacctg aaagcctgag ttatcttgct ataagctttt catggagcac ttcctttcca  
 2340  
 gaaactgatt tgtaactcat ttagagaatg tcctggcgtc ggttttttagc atatgtggta  
 2400  
 tttaaacaga gctagaatgt gatgtctgaa gataatgctg catttctggg tttcttgtg  
 2460  
 ggattttaaa ataaattgtg cctacaaata taaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 2520  
 aaaa  
 2524

&lt;210&gt; 5522

&lt;211&gt; 441

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5522

Met Val His Ile Lys Lys Gly Glu Leu Thr Gln Glu Glu Lys Glu Leu  
 1 5 10 15  
 Leu Glu Val Ile Gly Lys Gly Thr Val Gln Glu Ala Gly Thr Leu Leu  
 20 25 30  
 Ser Ser Lys Asn Val Arg Val Asn Cys Leu Asp Glu Asn Gly Met Thr  
 35 40 45  
 Pro Leu Met His Ala Ala Tyr Lys Gly Lys Leu Asp Met Cys Lys Leu  
 50 55 60  
 Leu Leu Arg His Gly Ala Asp Val Asn Cys His Gln His Glu His Gly  
 65 70 75 80  
 Tyr Thr Ala Leu Met Phe Ala Ala Leu Ser Gly Asn Lys Asp Ile Thr  
 85 90 95  
 Trp Val Met Leu Glu Ala Gly Ala Glu Thr Asp Val Val Asn Ser Val  
 100 105 110  
 Gly Arg Thr Ala Ala Gln Met Ala Phe Val Gly Gln His Asp Cys  
 115 120 125  
 Val Thr Ile Ile Asn Asn Phe Phe Pro Arg Glu Arg Leu Asp Tyr Tyr  
 130 135 140  
 Thr Lys Pro Gln Gly Leu Asp Lys Glu Pro Lys Leu Pro Pro Lys Leu

```
<210> 5523
<211> 6190
<212> DNA
<213> Homo sapiens
```

```
<400> 5523
naaaacctcc tgggaaataa ccgtagcccc ctggctcgtg ggggccgcct gttctcacta
60
acgccatggc ggggaccgga gtgagaaacc ggtgtctgtc actgactgca aagtgagcga
120
gaagcaggct gcggggccgtc ccagcacgac gtggagcccc gcggagacct cgagatgccc
180
cgcggggaag ctcttgcccc cgggagacgg ggggctaagg acgaggccct gggcgaagaa
240
tcgggggagc ggtggagccc cgagttccat ctgcagagga aattggcgga cagcagccac
300
```

agtgaacagc aagatcgaaa cagagtttct gaagaactta tcatggttgt ccaagaaatg  
360  
aaaaaatact tcccctcgga gagacgcaat aaaccaagca ctctagatgc cctcaactat  
420  
gctctccgct gtgtccacag cgttcaagca aacagtgagt ttttcagat tctcagtcag  
480  
aatggagcac ctcaggcaga tgtgagcatg tacagtcttg aggagctggc cactatcgct  
540  
tcagaacaca cttccaaaaa cacagatacc tttgtggcag tattttcatt tctgtctgga  
600  
aggtttagtgc acatttctga acaggctgct ttgatcctga atcgtaagaa agatgtcctg  
660  
gcgtcttctc actttgttga cctgcttgca cctcaagaca tgagggtatt ctacgcgcac  
720  
actgccagag ctcagcttcc tttctggaac aactggaccc aaagagctgc acggtatgaa  
780  
tgtgtcccg tgaaaccttt tttctgcagg atccgtggag gtgaagacag aaagcaagag  
840  
aagtgtcact ccccatccg gatcatcccc tatctgattc atgtacatca cctgcccag  
900  
ccagaattgg aatcggaacc ttgctgtctc actgtggttg aaaagattca ctctggttat  
960  
gaagctctc ggatcccagt gaataaaaga atcttcacca ccacacacac cccaggggtg  
1020  
gtttttcttg aagtagatga aaaagcagtg ctttctgctg gttacctacc tcaggacctg  
1080  
attggaacat cgatcctaag ctacctgcac cctgaagatc gttctctgat ggttgccata  
1140  
caccaaaaag ggcattctcc ctttgaacat tctccattc gattttgtac tcaaaacgga  
1200  
gactacatca tactggattc cagttgttcc agctttgtga atccctggag ccggaagatt  
1260  
tctttcatca ttggtcggca taaagttcga acgagccac taaatgagga tgttttctg  
1320  
accaaaatta aaaagatgaa cgataatgac aaagacataa cagaattaca agaacaaatt  
1380  
tacaacttc tcttacagcc agttcacgtg agcgtgtcca gcggtacgg gagcctggg  
1440  
agcagcgggt cgcaggagca gcttgcagc atcgctcct ccagtgaggc cagtgggcac  
1500  
cgtgtggagg agacgaaggc ggagcagatg accttcagc aggtctatgc cagtgtgaac  
1560  
aaaattaaaa atctgggtca gcagctctac attgagtcaa tgaccaaatc atcattcaag  
1620  
ccagtgcagg ggacacgcac agaaccgaat ggtggtggtg aatgtaagac ctttacttcc  
1680  
ttccaccaa cactgaaaaa caatagtgtg tacactgagc cctgtgagga tttgaggaac  
1740  
gatgagcaca gccatccta tcaacagatc aactgtatcg acagtgtcat cagatacctg  
1800  
aagagctaca acattccagc tttgaaaaga aagtgtatct cctgtacaaa tacaacttct  
1860  
tcctctcag aagaagacaa acagaaccac aaggcagatg atgtccaagc cttacaaggt  
1920

aacaagaatg cccctcagaa aatgccaaca aatggacggt ccatagacac aggaggagga  
1980  
gctccacaga tcctgtccac ggcgatgctg agcttggggt cgggcataag ccaatgcggt  
2040  
tacagcagca ccattgtcca tgtcccaccc ccagagacag ccagggatgc taccctcttc  
2100  
tgtgagccct ggaccctgaa catgcagcca gcccctttga cctcggaaga atttaaacac  
2160  
gtggggctca cagcggtgtg tctgtcagcg cacaccaga aggaagagca gaattatgtt  
2220  
gataaattcc gagaaaagat cctgtcatca ccctacagct cctatcttca gcaagaaagc  
2280  
aggagcaaag ctaaattatc atattttcaa ggagattcta cttccaagca gacgcggtcg  
2340  
gccggctgca ggaaagggaa gcacaagcgg aagaagctgc cggagccgcc agacagcagc  
2400  
agctcgaaca ccggtctctg tccccgcagg ggagcgcac agaacgcaca gccctgctgc  
2460  
ccctccgagg cctcctctcc gcacacctcg agcccgacct tcccacctgc cgccatgggt  
2520  
cccagccagg ccccttacct cgtcccagct tttccctcc cagccgcgac ctcacccgga  
2580  
agagaatacg cagccccggg aactgcaccg gaaggcctgc atgggcccgc cttgtccgag  
2640  
ggcttgacgc cttaccacgc tttccctttt ccttacttgg atacttttat gaccgttttc  
2700  
ctgcctgacc cccctgtctg tcctctgttg tcgccatcgt ttttgccatg tccattcctg  
2760  
ggggcgacag cctcttctgc gatatcacc tcaatgtcgt cagcaatgag tccaactctg  
2820  
gaccacccc cttcagtcac cagccaaagg agagaggagg aaaagtggga ggcacaaagc  
2880  
gaggggcacc cgttcattac ttcgagaagc agctcaccct tgcagttaa cttacttcag  
2940  
gaagagatgc ccagaccctc tgaatctcca gatcagatga gaaggaacac gtgcccacaa  
3000  
actgagtatc agtgtgttac aggaacaat ggcagtgaga gcagtcctgc tactaccggt  
3060  
gcactgtcca cggggtcacc tcccaggag aatccatccc atcctactgc cagcgctctg  
3120  
tccacaggat cgctcccat gaagaatcca tcccactcta ctgccagcg cttgtccaca  
3180  
ggatcgctc ccatgaagaa tccatcccat cctactgcca gcacactgtc catgggattg  
3240  
cctcccagca ggactccatc ccactctact gccactgttc tgtccacggg gtcacctccc  
3300  
agcgaatccc catccagaac tggttcagca gcacaggaa gcagcgacag cagtatatac  
3360  
cttactagta gtgtttatc ttctaaaatc tccaaaatg ggcagcaatc tcaggacgta  
3420  
cagaaaaaag aaacatttcc taatgtcgcc gaagagccca tctggagaat gatacggcag  
3480  
acacctgagc gcattctcat gacataccag gtacctgaga ggggttaaaga agttgtacta  
3540

aaagaagacc tggaaaagct agaaagtatg aggcagcagc agccccagtt ttctcatggg  
3600  
caaaaggagg agctggctaa ggtgtataat tggattcaaa gccagactgt cactcaagaa  
3660  
atcgacattc aagcctgtgt cacttgtgaa aatgaagatt cagctgatgg tgcggccaca  
3720  
tcctgtggtc aggttctggt agaagacagc tgttgagtga ctgtgaggat gaaccttcat  
3780  
accttttcca agacgtgtta cacagacaga cctttttaag tcctggactt ttaaatgacc  
3840  
atgaagttat cattgaatgt taagattttt tcttcttgat tttttaatac acgtaattct  
3900  
tttgaagcag acattgtata cagaatctta cttctctttg ttcctgatat attaaaatgg  
3960  
ccagttagtc tctttttgta gttgaattgt cttctaaaga gattggatgg cctctaaaga  
4020  
ggtatgtgta tctttatttc agatgtcacc cagagtaaat tataattaga agtatagcta  
4080  
gaatgagccc caaaccttag cctcatttat tttgttctgt tacataagtc attttccctc  
4140  
tagagtgcct gaagaaatgc cacctacagg ttgtgtactt ttcataatgg tttccatgaa  
4200  
tgtagtacgt tcatacaggc ttcattcaac ctggcggtcc cctccataat taagatgaaa  
4260  
cattccggtt ttctcacaac acattagcac atactgtcca ttagcatatc tgggataacc  
4320  
aggttttggg ggttgagttt tggccttcat ccttgtagat ccttttcta ttgatttccc  
4380  
acctccagt gaaattctga aagtcttctc ttaaaaaatcg atccgcttac catgggccta  
4440  
ttcttgtaag ttccagttag catttgcatg tgtaatatta aaatgaaaga gcttcttacc  
4500  
cagtgtgtt gcccttttga gtatttttgt ttttaaaata atgattgtaa aatgttttac  
4560  
aagtaatgta aaagctagta tcattcttac atacttctgt gtttaaattt tcattcttac  
4620  
caaaacagtt aactctttct ttccaatcaa ttatacaaa agaggctcgt ccagccctac  
4680  
cacaggtctg actggcactg ccttttggtt gcccttgaac agggcagtg tgtggggact  
4740  
gcaaaagaga aaacgtccag gcgagcccag ttgtcctcgc ccacagggtc ctgcaggctc  
4800  
catcagtcac cgctttctat ggcgtttgta gttgtgtctt ttaagaagtg agtgtgattg  
4860  
tttacttgat aaatcagctc actctctggt gctttttaga gaagtcctg attccttctt  
4920  
aaacttgga tgatagatga aattcacacc cctgcagatc agaaaaaca aatagaagaa  
4980  
aatgagggtt acagtaacct gttgtcttta tataacttgc acaaaactaa tttattttt  
5040  
tttctttttt ttgtttttgg ttttttatgg ttttttaagg aaaatacttt tctcctttga  
5100  
agttttacag ctttttgtaa atgcgtcctg ataattgatta ggaaaatcga ccttttctc  
5160



catgatgacc atcctcatag ctcagatctc ctttcaaagt agtggctttc tggatggtaa  
 5220  
 ttccatctta aggtgtcaga actattttca aatgctgect ttgacagttc ttggaatttt  
 5280  
 ctgatattaa gcagttccat gcaaatattc gtgttttata aatagctctc atagtctgct  
 5340  
 ccatcttgat agttaagtga tttctgaagc gtttgtgtgt gtgttgatca ggttgtgtga  
 5400  
 tatttttgct tgataaagaa tcaaatttga aacaattaac cagccagtag attgtctgtc  
 5460  
 agtgaccttc tgtagtaata aagtttttgc cactgtaaat aaaaacagta tccgtagcta  
 5520  
 tcaggatcat tgcgcactca tatatgctaa gccttctggt ctctaataga agcctttctt  
 5580  
 ttccattggt tctggatatt tgtattatcc aaatgtgctt atttctttgc cttagcacac  
 5640  
 gttttatgga gtacttgta tactaggttt gatttgaaac tgggtgcttgt cgcagaactg  
 5700  
 tcagagcatg aggagcgtc ctctgtggg tggacgcatt cacgcactcc caggttgac  
 5760  
 ctgctgctgg cggtgagcag ggggttcagc agcttgaccg atgcccccg agggggctct  
 5820  
 cccagctta aactttgttg tttaaatttg ttaacttttt atattaatga ctattgaaag  
 5880  
 tggtaataaa aatttatatt ataggcttca atgttttcat gaatgttacc caaaaagctg  
 5940  
 tgttttcttt ggtcagaggt caaaatttat gaaaaacaaa atgctgtatg aatggaaatc  
 6000  
 attttgcaat tgagtgcac ttcattgtaa ttcacagtgt aaatttaatc caaactgaaa  
 6060  
 ttttgtttca actgaatttg taattaactc tgaatttggt tttaatcatt agtaatat  
 6120  
 cagttgggta tctttttaag taaaaacaac aaataaactc tgtacatgta aaacgtgaaa  
 6180  
 aaaaaaaaaa  
 6190

&lt;210&gt; 5524

&lt;211&gt; 1193

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5524

Met	Pro	Arg	Gly	Glu	Ala	Pro	Gly	Pro	Gly	Arg	Arg	Gly	Ala	Lys	Asp
1				5					10					15	
Glu	Ala	Leu	Gly	Glu	Glu	Ser	Gly	Glu	Arg	Trp	Ser	Pro	Glu	Phe	His
		20						25					30		
Leu	Gln	Arg	Lys	Leu	Ala	Asp	Ser	Ser	His	Ser	Glu	Gln	Gln	Asp	Arg
		35						40				45			
Asn	Arg	Val	Ser	Glu	Glu	Leu	Ile	Met	Val	Val	Gln	Glu	Met	Lys	Lys
		50				55					60				
Tyr	Phe	Pro	Ser	Glu	Arg	Arg	Asn	Lys	Pro	Ser	Thr	Leu	Asp	Ala	Leu
65					70					75				80	
Asn	Tyr	Ala	Leu	Arg	Cys	Val	His	Ser	Val	Gln	Ala	Asn	Ser	Glu	Phe

4702

Tyr Thr Glu Pro Cys Glu Asp Leu Arg Asn Asp Glu His Ser Pro Ser  
 515 520 525  
 Tyr Gln Gln Ile Asn Cys Ile Asp Ser Val Ile Arg Tyr Leu Lys Ser  
 530 535 540  
 Tyr Asn Ile Pro Ala Leu Lys Arg Lys Cys Ile Ser Cys Thr Asn Thr  
 545 550 555 560  
 Thr Ser Ser Ser Ser Glu Glu Asp Lys Gln Asn His Lys Ala Asp Asp  
 565 570 575  
 Val Gln Ala Leu Gln Gly Asn Lys Asn Ala Pro Gln Lys Met Pro Thr  
 580 585 590  
 Asn Gly Arg Ser Ile Asp Thr Gly Gly Gly Ala Pro Gln Ile Leu Ser  
 595 600 605  
 Thr Ala Met Leu Ser Leu Gly Ser Gly Ile Ser Gln Cys Gly Tyr Ser  
 610 615 620  
 Ser Thr Ile Val His Val Pro Pro Pro Glu Thr Ala Arg Asp Ala Thr  
 625 630 635 640  
 Leu Phe Cys Glu Pro Trp Thr Leu Asn Met Gln Pro Ala Pro Leu Thr  
 645 650 655  
 Ser Glu Glu Phe Lys His Val Gly Leu Thr Ala Ala Val Leu Ser Ala  
 660 665 670  
 His Thr Gln Lys Glu Glu Gln Asn Tyr Val Asp Lys Phe Arg Glu Lys  
 675 680 685  
 Ile Leu Ser Ser Pro Tyr Ser Ser Tyr Leu Gln Gln Glu Ser Arg Ser  
 690 695 700  
 Lys Ala Lys Tyr Ser Tyr Phe Gln Gly Asp Ser Thr Ser Lys Gln Thr  
 705 710 715 720  
 Arg Ser Ala Gly Cys Arg Lys Gly Lys His Lys Arg Lys Lys Leu Pro  
 725 730 735  
 Glu Pro Pro Asp Ser Ser Ser Ser Asn Thr Gly Ser Gly Pro Arg Arg  
 740 745 750  
 Gly Ala His Gln Asn Ala Gln Pro Cys Cys Pro Ser Ala Ala Ser Ser  
 755 760 765  
 Pro His Thr Ser Ser Pro Thr Phe Pro Pro Ala Ala Met Val Pro Ser  
 770 775 780  
 Gln Ala Pro Tyr Leu Val Pro Ala Phe Pro Leu Pro Ala Ala Thr Ser  
 785 790 795 800  
 Pro Gly Arg Glu Tyr Ala Ala Pro Gly Thr Ala Pro Glu Gly Leu His  
 805 810 815  
 Gly Pro Pro Leu Ser Glu Gly Leu Gln Pro Tyr Pro Ala Phe Pro Phe  
 820 825 830  
 Pro Tyr Leu Asp Thr Phe Met Thr Val Phe Leu Pro Asp Pro Pro Val  
 835 840 845  
 Cys Pro Leu Leu Ser Pro Ser Phe Leu Pro Cys Pro Phe Leu Gly Ala  
 850 855 860  
 Thr Ala Ser Ser Ala Ile Ser Pro Ser Met Ser Ser Ala Met Ser Pro  
 865 870 875 880  
 Thr Leu Asp Pro Pro Pro Ser Val Thr Ser Gln Arg Arg Glu Glu Glu  
 885 890 895  
 Lys Trp Glu Ala Gln Ser Glu Gly His Pro Phe Ile Thr Ser Arg Ser  
 900 905 910  
 Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Glu Glu Met Pro Arg Pro  
 915 920 925  
 Ser Glu Ser Pro Asp Gln Met Arg Arg Asn Thr Cys Pro Gln Thr Glu  
 930 935 940

Tyr Gln Cys Val Thr Gly Asn Asn Gly Ser Glu Ser Ser Pro Ala Thr  
 945 950 955 960  
 Thr Gly Ala Leu Ser Thr Gly Ser Pro Pro Arg Glu Asn Pro Ser His  
 965 970 975  
 Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys Asn Pro  
 980 985 990  
 Ser His Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys  
 995 1000 1005  
 Asn Pro Ser His Pro Thr Ala Ser Thr Leu Ser Met Gly Leu Pro Pro  
 1010 1015 1020  
 Ser Arg Thr Pro Ser His Pro Thr Ala Thr Val Leu Ser Thr Gly Ser  
 1025 1030 1035 1040  
 Pro Pro Ser Glu Ser Pro Ser Arg Thr Gly Ser Ala Ala Ser Gly Ser  
 1045 1050 1055  
 Ser Asp Ser Ser Ile Tyr Leu Thr Ser Ser Val Tyr Ser Ser Lys Ile  
 1060 1065 1070  
 Ser Gln Asn Gly Gln Gln Ser Gln Asp Val Gln Lys Lys Glu Thr Phe  
 1075 1080 1085  
 Pro Asn Val Ala Glu Glu Pro Ile Trp Arg Met Ile Arg Gln Thr Pro  
 1090 1095 1100  
 Glu Arg Ile Leu Met Thr Tyr Gln Val Pro Glu Arg Val Lys Glu Val  
 1105 1110 1115 1120  
 Val Leu Lys Glu Asp Leu Glu Lys Leu Glu Ser Met Arg Gln Gln Gln  
 1125 1130 1135  
 Pro Gln Phe Ser His Gly Gln Lys Glu Glu Leu Ala Lys Val Tyr Asn  
 1140 1145 1150  
 Trp Ile Gln Ser Gln Thr Val Thr Gln Glu Ile Asp Ile Gln Ala Cys  
 1155 1160 1165  
 Val Thr Cys Glu Asn Glu Asp Ser Ala Asp Gly Ala Ala Thr Ser Cys  
 1170 1175 1180  
 Gly Gln Val Leu Val Glu Asp Ser Cys  
 1185 1190

&lt;210&gt; 5525

&lt;211&gt; 761

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5525

nggatccaag gtgagttgtc tggcaagaga agagtaggac tctgcatacc atgcccagag  
 60  
 ctgagatgga ctttatctgc ctacctgct ctgcttgtc agtggaaca tgaggagaga  
 120  
 gtgggcatca gtggttctgg ggcagggtct ctctctgag atggggatta aggaagagg  
 180  
 tgagcagggg tggatgttta gggggatgcc taaattcccc agtaaggaga ccgcagataa  
 240  
 actcaactct gtccatctta gcagggtat gtgaccttg aggatgtggc tgtctacttc  
 300  
 tcccaggagg aatggagatt gcttgatgac gctcagaggc tcctctaccg caatgtgatg  
 360  
 ctggagaact ttacacttct ggcctctctg ggacttgcgt cttccaagac ccatgaaata  
 420

acccagctgg agtcatggga ggagcccttc atgcctgctt ggaagtgt gacttcagcc  
 480  
 ataccgagag aaactctgag gatggccttt atgagggagc tggcaattga acatcattca  
 540  
 tctaaatatg cacactggag gcaagatgag aattcctgac agattgtcct tctgagaag  
 600  
 acagccctct gccttggagc tccagagaga gggagccctg tattcttggc tgtaccctgc  
 660  
 gaatggagtt ttgatctcgc tgagtttggg gttgggggag gaaaggagtg gtcttggctc  
 720  
 aaatgtgact cacttttgc tttcttgtga atgtagatc t  
 761

&lt;210&gt; 5526

&lt;211&gt; 102

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5526

Val	Thr	Phe	Glu	Asp	Val	Ala	Val	Tyr	Phe	Ser	Gln	Glu	Glu	Trp	Arg
1				5					10					15	
Leu	Leu	Asp	Asp	Ala	Gln	Arg	Leu	Leu	Tyr	Arg	Asn	Val	Met	Leu	Glu
		20					25					30			
Asn	Phe	Thr	Leu	Leu	Ala	Ser	Leu	Gly	Leu	Ala	Ser	Ser	Lys	Thr	His
		35				40					45				
Glu	Ile	Thr	Gln	Leu	Glu	Ser	Trp	Glu	Glu	Pro	Phe	Met	Pro	Ala	Trp
	50					55				60					
Glu	Val	Val	Thr	Ser	Ala	Ile	Pro	Arg	Glu	Thr	Leu	Arg	Met	Ala	Phe
65					70					75				80	
Met	Arg	Glu	Leu	Ala	Ile	Glu	His	His	Ser	Ser	Lys	Tyr	Ala	His	Trp
			85					90						95	
Arg	Gln	Asp	Glu	Asn	Ser										
						100									

&lt;210&gt; 5527

&lt;211&gt; 728

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5527

nnagatctga cactaaagg catgagaacc actggatata tgtatatcc gcctttggca  
 60  
 gcgttgcaact ctccagttc tctactctcc cctcaggtca ccgattgaa actgtctcag  
 120  
 gaccttgatg atcttgccat tctctacctg gccacagttc aagccattgc tttggggact  
 180  
 cgcttcatta tagaagccat ggaggcagca gggcactcaa tcagtactct tttcctatgt  
 240  
 ggaggcctca gcaagaatcc cctttttgtg caaatgcatg cggacattac tggcatgcct  
 300  
 gtggctcctgt cgcaagaggt ggagtcggtt cttgtgggtg ctgctgttct ggggtgcctgt  
 360  
 gcctcagggg atttcgcttc tgtacaggaa gcaatggcaa aaatgagcaa agttgggaaa  
 420

gtttgtgtcc cgagactaca ggataaaaaa tactatgata agaaatacca agtattcctg  
 480  
 aagctgggtg aacaccagaa ggagtatttg gcgatcatga atgatgactg aacagggctt  
 540  
 gcaggtgctg atgccagaag cttatgtgcc attgcattaa agacttctgt catttgatcc  
 600  
 atgttcaaga cccttgaggt attgtttcat cttttctgta ttgtctttca ataaagaaaa  
 660  
 caaacatgtg caaccagaaa aaaaaaaaaa aaaaataaaa aaaaaaaaaa aaaaaaaaaa  
 720  
 aaaaaaaaaa  
 728

<210> 5528

<211> 176

<212> PRT

<213> Homo sapiens

<400> 5528

Xaa	Asp	Leu	Thr	Leu	Lys	Gly	Met	Arg	Thr	Thr	Gly	Tyr	Leu	Tyr	Ile
1				5					10					15	
Pro	Ala	Leu	Ala	Ala	Leu	His	Ser	Pro	Ser	Ser	Leu	Leu	Ser	Pro	Gln
			20					25					30		
Val	Thr	Gly	Leu	Lys	Leu	Ser	Gln	Asp	Leu	Asp	Asp	Leu	Ala	Ile	Leu
		35					40					45			
Tyr	Leu	Ala	Thr	Val	Gln	Ala	Ile	Ala	Leu	Gly	Thr	Arg	Phe	Ile	Ile
		50				55					60				
Glu	Ala	Met	Glu	Ala	Ala	Gly	His	Ser	Ile	Ser	Thr	Leu	Phe	Leu	Cys
65					70					75				80	
Gly	Gly	Leu	Ser	Lys	Asn	Pro	Leu	Phe	Val	Gln	Met	His	Ala	Asp	Ile
				85					90					95	
Thr	Gly	Met	Pro	Val	Val	Leu	Ser	Gln	Glu	Val	Glu	Ser	Val	Leu	Val
			100					105					110		
Gly	Ala	Ala	Val	Leu	Gly	Ala	Cys	Ala	Ser	Gly	Asp	Phe	Ala	Ser	Val
		115					120					125			
Gln	Glu	Ala	Met	Ala	Lys	Met	Ser	Lys	Val	Gly	Lys	Val	Val	Phe	Pro
		130				135					140				
Arg	Leu	Gln	Asp	Lys	Lys	Tyr	Tyr	Asp	Lys	Lys	Tyr	Gln	Val	Phe	Leu
145				150						155				160	
Lys	Leu	Val	Glu	His	Gln	Lys	Glu	Tyr	Leu	Ala	Ile	Met	Asn	Asp	Asp
				165					170					175	

<210> 5529

<211> 2602

<212> DNA

<213> Homo sapiens

<400> 5529

nntgcccacc ttttgtgggg ggggaaagga cacaagggtt tttttttttt ttttttttta  
 60  
 gcaatggcgg ttcccggcgt ggggctcttg acccgtttga acctgtgtgc ccggagaaga  
 120  
 actcgagtcc agcggcctat cgtcaggctt ttgagttgcc caggaactgt ggccaaagac  
 180

cttaggagag acgagcagcc ttcagggagc gtggagacag gttttgaaga caagattccc  
240  
aaaaggagat tctctgagat gcaaaatgaa agacgagaac aggcacagcg gactgtttta  
300  
atacattgcc cagagaaaat cagtgaaaac aagttttctta aatattttatc ccaatttgga  
360  
cctattaata atcattttctt ctatgaaagc tttggtctct atgctgtcgt agaattttgc  
420  
caaaaggaaa gcataggttc actgcagaat gggactcata ctccaagcac ggccatggag  
480  
actgcaattc cattcagatc acgtttcttc aatctgaagt tgaaaaacca gacttctgaa  
540  
cggtcacgcy tacggtcaag taatcagttg ccacgttcaa acaagcagct ttttgaatta  
600  
ctttgttatg cagaaagtat agacgatcag ctgaacactc tcttgaagga gttccagcta  
660  
acagaggaga acactaagct ccgatatctc acctgttctc ttattgaaga catggccgcc  
720  
gcgtattttc cagactgcat agtcagaccc tttggtcctt cagtcaacac ttttgggaag  
780  
ttaggatgtg atttgacat gtttttggat ctatgatgaa ccagaaacct cagcgtcac  
840  
aagatctcag gaaattttct gatggaattt caagtgaaaa atgttccttc agaaagaatt  
900  
gcaactcaga agatcctgtc tgtgttagga gagtgccttg accacttttg ccctggctgt  
960  
gtgggtgtgc aaaaaatatt aaatgcccgg tgtccgctcg tgaggttctc acaccaggcc  
1020  
tccggatttc agtgtgattt gactacgaac aataggattg ccttgacaag ttccgaactc  
1080  
ctttatatat atgggtgcct agactcaaga gtgagagcct tgggtgttcag tgtacgggtc  
1140  
tgggctcgag cacattcact aacaagtagt attcctggtg catggattac aaattttctc  
1200  
cttacaatga tggatcctt ttttctccag agaagatcac cccctattct tccaacacta  
1260  
gattccttaa aaacctagc agatgcagaa gataaatgtg taatagaagg caacaactgc  
1320  
acatttggtc gtgacttgag tagaattaaa ccttcacaga acacagaaac attagaatta  
1380  
ctactgaagg aattttttga gtattttggc aattttgctt tcgataaaaa ttccataaat  
1440  
attcgacagg gaagggagca aaacaaacct gattcttctc ctctgtacat tcagaatcca  
1500  
tttgaaactt ctctcaacat aagcaaaaat gtaagtcaaa gccagctgca aaaatttgta  
1560  
gatttggccc gagaaagtgc ctggatttta caacaggaag atacagatcg acctccata  
1620  
tcaagtaatc ggccctgggg gctggtatcc ctattgctac catctgctcc aaacagaaag  
1680  
tcctttacca agaagaaaag caataagttt gcaattgaaa cagtcaaaaa cttgctagaa  
1740  
tctttaaaag gtaacagaac agaaaatttc acaaaaacca gtgggaagag aacaattagt  
1800

actcagacat gatggctgct acattgtgta aagaactggg cttagcctat caaatggctt  
 1860  
 gtggacttac ttggaaaac tgatttgaaa ctttcacaga ttcagcttt catctgatgt  
 1920  
 cacttttcat gatcttctca ttggccccc taacctgggc tgaagttctg ggatgttttc  
 1980  
 agtttgatca gtctgatact cagtggcact ttattaaaac atcagctgtg gagtgtggcg  
 2040  
 gtgcacacct gtagtcccag ctgctcagga ggctgaggca ggaggatctc ttgagcccag  
 2100  
 gattttgaat ccatcgtgga caacatagca agattccatc tctaaaaaaa atgaaaataa  
 2160  
 acataagcca caaggaatgg gtgaaagatt attgtaatgt gctttaacta aataggtaaa  
 2220  
 tatactaaac aaatgctaaa actcagtttt aggatgaaac cattgttgat atccacatca  
 2280  
 gtccctgttt agaaaacatt taaaatgact tttagttatg tacagtacgt tggcaatgaa  
 2340  
 tacattaagc ttcaaaattt ggtagtgtc tcgaatatgt atatttgat ttttcaagcg  
 2400  
 aagttctctt attcacatat aaattaaagt gggttggtac tgatatcaaa aaatgtttat  
 2460  
 gtttttagaa cagacatttc agtcactgca ttcttaggta ttccaaacca aatatgatga  
 2520  
 catcaataga ttgcatttta aaaatattgt ttgatttttc tattttcaaa aataaaattc  
 2580  
 tgtttctaac taaaaaaaaa aa  
 2602

&lt;210&gt; 5530

&lt;211&gt; 603

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5530

Xaa	Ala	His	Leu	Leu	Trp	Gly	Gly	Lys	Gly	His	Lys	Val	Phe	Phe	Phe
1			5					10					15		
Phe	Phe	Phe	Leu	Ala	Met	Ala	Val	Pro	Gly	Val	Gly	Leu	Leu	Thr	Arg
			20					25				30			
Leu	Asn	Leu	Cys	Ala	Arg	Arg	Arg	Thr	Arg	Val	Gln	Arg	Pro	Ile	Val
		35					40				45				
Arg	Leu	Leu	Ser	Cys	Pro	Gly	Thr	Val	Ala	Lys	Asp	Leu	Arg	Arg	Asp
	50					55					60				
Glu	Gln	Pro	Ser	Gly	Ser	Val	Glu	Thr	Gly	Phe	Glu	Asp	Lys	Ile	Pro
65					70					75				80	
Lys	Arg	Arg	Phe	Ser	Glu	Met	Gln	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Gln
			85					90					95		
Arg	Thr	Val	Leu	Ile	His	Cys	Pro	Glu	Lys	Ile	Ser	Glu	Asn	Lys	Phe
		100						105				110			
Leu	Lys	Tyr	Leu	Ser	Gln	Phe	Gly	Pro	Ile	Asn	Asn	His	Phe	Phe	Tyr
		115					120					125			
Glu	Ser	Phe	Gly	Leu	Tyr	Ala	Val	Val	Glu	Phe	Cys	Gln	Lys	Glu	Ser
	130					135					140				
Ile	Gly	Ser	Leu	Gln	Asn	Gly	Thr	His	Thr	Pro	Ser	Thr	Ala	Met	Glu



145		150		155		160									
Thr	Ala	Ile	Pro	Phe	Arg	Ser	Arg	Phe	Phe	Asn	Leu	Lys	Leu	Lys	Asn
		165							170					175	
Gln	Thr	Ser	Glu	Arg	Ser	Arg	Val	Arg	Ser	Ser	Asn	Gln	Leu	Pro	Arg
		180						185					190		
Ser	Asn	Lys	Gln	Leu	Phe	Glu	Leu	Leu	Cys	Tyr	Ala	Glu	Ser	Ile	Asp
		195					200					205			
Asp	Gln	Leu	Asn	Thr	Leu	Leu	Lys	Glu	Phe	Gln	Leu	Thr	Glu	Glu	Asn
	210					215					220				
Thr	Lys	Leu	Arg	Tyr	Leu	Thr	Cys	Ser	Leu	Ile	Glu	Asp	Met	Ala	Ala
225				230						235					240
Ala	Tyr	Phe	Pro	Asp	Cys	Ile	Val	Arg	Pro	Phe	Gly	Ser	Ser	Val	Asn
			245						250					255	
Thr	Phe	Gly	Lys	Leu	Gly	Cys	Asp	Leu	Asp	Met	Phe	Leu	Asp	Leu	Asp
		260					265						270		
Glu	Thr	Arg	Asn	Leu	Ser	Ala	His	Lys	Ile	Ser	Gly	Asn	Phe	Leu	Met
	275						280					285			
Glu	Phe	Gln	Val	Lys	Asn	Val	Pro	Ser	Glu	Arg	Ile	Ala	Thr	Gln	Lys
	290					295						300			
Ile	Leu	Ser	Val	Leu	Gly	Glu	Cys	Leu	Asp	His	Phe	Gly	Pro	Gly	Cys
305				310						315					320
Val	Gly	Val	Gln	Lys	Ile	Leu	Asn	Ala	Arg	Cys	Pro	Leu	Val	Arg	Phe
			325						330					335	
Ser	His	Gln	Ala	Ser	Gly	Phe	Gln	Cys	Asp	Leu	Thr	Thr	Asn	Asn	Arg
		340						345					350		
Ile	Ala	Leu	Thr	Ser	Ser	Glu	Leu	Leu	Tyr	Ile	Tyr	Gly	Ala	Leu	Asp
	355						360					365			
Ser	Arg	Val	Arg	Ala	Leu	Val	Phe	Ser	Val	Arg	Cys	Trp	Ala	Arg	Ala
	370					375					380				
His	Ser	Leu	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Trp	Ile	Thr	Asn	Phe	Ser
385				390						395					400
Leu	Thr	Met	Met	Val	Ile	Phe	Phe	Leu	Gln	Arg	Arg	Ser	Pro	Pro	Ile
		405						410						415	
Leu	Pro	Thr	Leu	Asp	Ser	Leu	Lys	Thr	Leu	Ala	Asp	Ala	Glu	Asp	Lys
		420						425					430		
Cys	Val	Ile	Glu	Gly	Asn	Asn	Cys	Thr	Phe	Val	Arg	Asp	Leu	Ser	Arg
	435						440					445			
Ile	Lys	Pro	Ser	Gln	Asn	Thr	Glu	Thr	Leu	Glu	Leu	Leu	Leu	Lys	Glu
	450					455					460				
Phe	Phe	Glu	Tyr	Phe	Gly	Asn	Phe	Ala	Phe	Asp	Lys	Asn	Ser	Ile	Asn
465				470						475					480
Ile	Arg	Gln	Gly	Arg	Glu	Gln	Asn	Lys	Pro	Asp	Ser	Ser	Pro	Leu	Tyr
			485						490					495	
Ile	Gln	Asn	Pro	Phe	Glu	Thr	Ser	Leu	Asn	Ile	Ser	Lys	Asn	Val	Ser
		500						505					510		
Gln	Ser	Gln	Leu	Gln	Lys	Phe	Val	Asp	Leu	Ala	Arg	Glu	Ser	Ala	Trp
	515						520					525			
Ile	Leu	Gln	Gln	Glu	Asp	Thr	Asp	Arg	Pro	Ser	Ile	Ser	Ser	Asn	Arg
	530					535					540				
Pro	Trp	Gly	Leu	Val	Ser	Leu	Leu	Leu	Pro	Ser	Ala	Pro	Asn	Arg	Lys
545				550						555					560
Ser	Phe	Thr	Lys	Lys	Lys	Ser	Asn	Lys	Phe	Ala	Ile	Glu	Thr	Val	Lys
			565						570					575	
Asn	Leu	Leu	Glu	Ser	Leu	Lys	Gly	Asn	Arg	Thr	Glu	Asn	Phe	Thr	Lys

580 585 590  
 Thr Ser Gly Lys Arg Thr Ile Ser Thr Gln Thr  
 595 600  
 <210> 5531  
 <211> 3056  
 <212> DNA  
 <213> Homo sapiens  
 <400> 5531  
 gccccgtccg cgtgacgctc ctgcctgctc gcggccaagc catgctccgc ccagctcag  
 60  
 gtaacggagg ccttgaaaag agactctgct tcaggtcacc cagcagagat cagcaatcct  
 120  
 tggctcactg aggaggtttg gatttgcttc aaagggcact gcaaaaattg aacagaggaa  
 180  
 tcccaaggaa gctgcctgaa tttgctgta tactctcgtt ctgcgactta taaaggacca  
 240  
 gacaaatcaa attagtgggt ttggtttccg ccagctgtgg atgcctttga cattatgacc  
 300  
 gcagaggatt ccaccgcagc catgagcagt gactcggccg ccgggtcttc ggccaagggtg  
 360  
 cccgagggcg tggcgggcgc gcccaacgag gcagcactgc tggcgctgat ggagcgcacg  
 420  
 ggctacagca tgggtcaaga gaacgggcag cgcaagtacg gcggcccacc gcccggctgg  
 480  
 gaggggccgc acccgcagcg tggctgcgag gtcttcgtgg gcaagatccc gcgcgacgtg  
 540  
 tacgaggacg agctggtgcc cgtgttcgag gccgtgggcc gcatctacga gctgcgcctc  
 600  
 atgatggact ttgacggcaa gaaccgcggc tacgccttcg tcatgtactg ccacaagcac  
 660  
 gaggccaagc gcgcagtgcg tgagctcaac aactacgaga tccgcccggg ccgcctgctc  
 720  
 ggcgtgtgct gcagcgtgga caactgcgcg ctcttcacg gcgggatccc caagatgaag  
 780  
 aagcgcgagg aaatcctgga ggagattgcc aaggtcaccg agggcgtgct ggacgtgatc  
 840  
 gtctacgcca gcgcggccga caagatgaag aaccgcggct tgccttcgt ggagtacgag  
 900  
 agccaccgcg cggctgccat ggctcgccgc aagctcatgc ctggccgcat ccagctgtgg  
 960  
 ggccaccaga tcgccgtgga ctgggcccag cctgagatcg acgtggacga ggacgtgatg  
 1020  
 gagaccgtga agatcctcta cgtgcgcaac ctcatgatcg agaccaccga ggaccaccatc  
 1080  
 aagaagagct tcggccagtt caaccccggc tgcgtggagc gcgtcaagaa gatccgcgac  
 1140  
 tacgccttcg tgcacttcac cagccgcgag gatgcctgac atgccatgaa caacctcaac  
 1200  
 ggcaactgagc tggagggctc gtgcctggag gtcacgctgg ccaagcccgt ggacaaggag  
 1260  
 cagtactcgc gctaccagaa ggcagccagg ggcggcggcg cggctgaggc agcgcagcag  
 1320

cccagctacg tgtactcctg cgacccctac acactggcct actacggcta cccctacaac  
1380  
gcgctcattg ggcccaacag ggactacttt gtgaaagcag gcagcataag aggccgaggg  
1440  
cgaggcgcag ctggcaacag agccccaggg cctaggggtt cctacctcgg gggatattct  
1500  
gctggccgtg gtatatatag ccgatatcat gaagggaaag gaaagcagca agaaaaagga  
1560  
tatgaactgg tgccgaattt ggaaatccct accgtcaacc cagttgccat taaacctggg  
1620  
acagttagcca tccctgccat tggggctcag tattccatgt ttccagcagc tccagccct  
1680  
aaaatgattg aagatggcaa aatccacaca gtggagcaca tgatcagccc cattgctgtg  
1740  
cagccagacc cagccagtgc tgctgccgcc gcagccgcgg ccgcagccgc cgagccgct  
1800  
gtcattccca ctgtgtcgac gccaccacct ttccagggcc gccaataac tccagtatac  
1860  
acggtggctc caaacgttca gagaattcct actgccggga tctacggggc cagttacgtg  
1920  
ccatttgctg ctccagctac agccacgac gccacactac agaagaacgc ggcagccgcg  
1980  
gccgccgtgt atggaggata cgcaggctac atacctcagg ccttcctcgc tgcctgccat  
2040  
caggtcccca tccccgacgt ctaccagaca tactgaggct ggtgaccagc acgaagacag  
2100  
accacacaaa caccactgaa ggaacgcttg actatattatg aagaaggaac atgttggtat  
2160  
cacacatgca acctgaaagt gaagaatggt agcagattta tttctgaatt attttatata  
2220  
catgaagttt tctactagttt ttttaagacta ttttcaactt agcatgccta cgttcataca  
2280  
tttccaaaag acttgcaatg gttcgtgcct tcattccatc ttttaaaaat ttgtatgctg  
2340  
tactacattt gtatagaggt ttttgttgtt gtttttttaa ggatatattt tcagtatgaa  
2400  
ggttattttc ttaacttctg cactccagag atttctattt tgtagtacct tcaataatat  
2460  
atcaactata tattaataaaa gcacacttga ggagctaggg aactattttg aaaaatatat  
2520  
acaatattta aagatacaaa cagtagtgct taaaaatact acataaagca ttattttaaa  
2580  
ggttatactg gaaagtgcaa ttttaaaatg agtaaaacct ctgtatttct gctggcatta  
2640  
agggttgatg gtgttaccat gtatcatcat ggcggtacta ttttttaaaa gaaattaaac  
2700  
actggatctc tccttaagcc aacattgaaa agacttgccg cacttctgag tccaaacact  
2760  
ggaaagctct cctttgccac cgttagccgg ggctcattct ccatgtgcct tagccttaaa  
2820  
catgccccca ctcccacatc tctcaccctg tcccctctc cccagattcc caatcccacc  
2880  
gcaatgtttg gcaagcctag gactgataag tagctctgat agaggagctg gtggctttta  
2940

tacttcttcc tgggtttttg ttgggggttg ttgtttcggt gttttttggt ttttttttgg  
 3000  
 tttgggtggg gaagtattgt cttctacgtg tgccattttc agtagcagag taagct  
 3056

<210> 5532

<211> 593

<212> PRT

<213> Homo sapiens

<400> 5532

Met	Thr	Ala	Glu	Asp	Ser	Thr	Ala	Ala	Met	Ser	Ser	Asp	Ser	Ala	Ala
1				5					10					15	
Gly	Ser	Ser	Ala	Lys	Val	Pro	Glu	Gly	Val	Ala	Gly	Ala	Pro	Asn	Glu
			20					25					30		
Ala	Ala	Leu	Leu	Ala	Leu	Met	Glu	Arg	Thr	Gly	Tyr	Ser	Met	Val	Gln
		35					40					45			
Glu	Asn	Gly	Gln	Arg	Lys	Tyr	Gly	Gly	Pro	Pro	Pro	Gly	Trp	Glu	Gly
	50					55					60				
Pro	His	Pro	Gln	Arg	Gly	Cys	Glu	Val	Phe	Val	Gly	Lys	Ile	Pro	Arg
65						70				75				80	
Asp	Val	Tyr	Glu	Asp	Glu	Leu	Val	Pro	Val	Phe	Glu	Ala	Val	Gly	Arg
				85					90					95	
Ile	Tyr	Glu	Leu	Arg	Leu	Met	Met	Asp	Phe	Asp	Gly	Lys	Asn	Arg	Gly
		100						105					110		
Tyr	Ala	Phe	Val	Met	Tyr	Cys	His	Lys	His	Glu	Ala	Lys	Arg	Ala	Val
	115						120					125			
Arg	Glu	Leu	Asn	Asn	Tyr	Glu	Ile	Arg	Pro	Gly	Arg	Leu	Leu	Gly	Val
	130						135				140				
Cys	Cys	Ser	Val	Asp	Asn	Cys	Arg	Leu	Phe	Ile	Gly	Gly	Ile	Pro	Lys
145						150				155				160	
Met	Lys	Lys	Arg	Glu	Glu	Ile	Leu	Glu	Glu	Ile	Ala	Lys	Val	Thr	Glu
				165					170					175	
Gly	Val	Leu	Asp	Val	Ile	Val	Tyr	Ala	Ser	Ala	Ala	Asp	Lys	Met	Lys
			180					185					190		
Asn	Arg	Gly	Phe	Ala	Phe	Val	Glu	Tyr	Glu	Ser	His	Arg	Ala	Ala	Ala
	195						200					205			
Met	Ala	Arg	Arg	Lys	Leu	Met	Pro	Gly	Arg	Ile	Gln	Leu	Trp	Gly	His
	210					215					220				
Gln	Ile	Ala	Val	Asp	Trp	Ala	Glu	Pro	Glu	Ile	Asp	Val	Asp	Glu	Asp
225					230					235				240	
Val	Met	Glu	Thr	Val	Lys	Ile	Leu	Tyr	Val	Arg	Asn	Leu	Met	Ile	Glu
				245					250					255	
Thr	Thr	Glu	Asp	Thr	Ile	Lys	Lys	Ser	Phe	Gly	Gln	Phe	Asn	Pro	Gly
			260					265					270		
Cys	Val	Glu	Arg	Val	Lys	Lys	Ile	Arg	Asp	Tyr	Ala	Phe	Val	His	Phe
	275						280					285			
Thr	Ser	Arg	Glu	Asp	Ala	Val	His	Ala	Met	Asn	Asn	Leu	Asn	Gly	Thr
	290					295					300				
Glu	Leu	Glu	Gly	Ser	Cys	Leu	Glu	Val	Thr	Leu	Ala	Lys	Pro	Val	Asp
305					310					315				320	
Lys	Glu	Gln	Tyr	Ser	Arg	Tyr	Gln	Lys	Ala	Ala	Arg	Gly	Gly	Gly	Ala
				325					330					335	
Ala	Glu	Ala	Ala	Gln	Gln	Pro	Ser	Tyr	Val	Tyr	Ser	Cys	Asp	Pro	Tyr

	340		345		350
Thr	Leu	Ala	Tyr	Tyr	Gly
	355		360		365
Arg	Asp	Tyr	Phe	Val	Lys
	370		375		380
Ala	Ala	Gly	Asn	Arg	Ala
	385		390		395
Tyr	Ser	Ala	Gly	Arg	Gly
			405		410
Lys	Gln	Gln	Glu	Lys	Gly
			420		425
Thr	Val	Asn	Pro	Val	Ala
			435		440
Ile	Gly	Ala	Gln	Tyr	Ser
			450		455
Ile	Glu	Asp	Gly	Lys	Ile
			465		470
Ala	Val	Gln	Pro	Asp	Pro
			485		490
Ala	Ala	Ala	Ala	Ala	Val
			500		505
Phe	Gln	Gly	Arg	Pro	Ile
			515		520
Gln	Arg	Ile	Pro	Thr	Ala
			530		535
Ala	Ala	Pro	Ala	Thr	Ala
			545		550
Ala	Ala	Ala	Ala	Val	Tyr
			565		570
Phe	Pro	Ala	Ala	Ile	Gln
			580		585
					590

Tyr

&lt;210&gt; 5533

&lt;211&gt; 505

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5533

```

ncacttgccct cctgcctgc ttctggctgc cttgaatgcc tggctcctca agctccttct
60
gggtctgaca aagcagggac catgtctacc ttggctacc gaagaggact cagtaaatac
120
gaatccatcg acgaggatga actcctcgcc tcctgtcag ccgaggagct gaaggagcta
180
gagagagagt tggaagacat tgaacctgac cgcaaccttc ccgtggggct aaggcaaaag
240
agcctgacag agaaaacccc cacagggaca ttcagcagag aggcactgat ggcctattgg
300
gaaaaggagt cccaaaaact cttggagaag gagaggctgg gggaatgtgg aaaggttgca
360
gaagacaaag aggaaagtga ggaagagctt atctttactg aaagtaacag tgaggtttct
420

```

gaggaagtgt atacagagga ggaggaggag gagtcccagg aggaagagga ggaagaagac  
 480  
 agtgacgaag aggaaagaac aattg  
 505

<210> 5534  
 <211> 168  
 <212> PRT  
 <213> Homo sapiens

<400> 5534  
 Xaa Leu Ala Ser Leu Pro Ala Ser Gly Cys Leu Glu Cys Leu Val Leu  
 1 5 10 15  
 Gln Ala Pro Ser Gly Ser Asp Lys Ala Gly Thr Met Ser Thr Phe Gly  
 20 25 30  
 Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile Asp Glu Asp Glu Leu  
 35 40 45  
 Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu Leu Glu Arg Glu Leu  
 50 55 60  
 Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val Gly Leu Arg Gln Lys  
 65 70 75 80  
 Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe Ser Arg Glu Ala Leu  
 85 90 95  
 Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu Leu Glu Lys Glu Arg  
 100 105 110  
 Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys Glu Glu Ser Glu Glu  
 115 120 125  
 Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val Ser Glu Glu Val Tyr  
 130 135 140  
 Thr Glu Glu Glu Glu Glu Ser Gln Glu Glu Glu Glu Glu Asp  
 145 150 155 160  
 Ser Asp Glu Glu Glu Arg Thr Ile  
 165

<210> 5535  
 <211> 1887  
 <212> DNA  
 <213> Homo sapiens

<400> 5535  
 ngcacgagcc gagccttctc agaccggggg gacgcctaac cccgcgagat gaggaaactg  
 60  
 aggccgcgag agccgcacac agcagagaag cagcagaatc gggaatcaaa cccagctctg  
 120  
 tctgacccca gagcctgtgc cttaaccac tggctaggct gaactgcctt tgttcttcac  
 180  
 tgtccccatc acctctttca aacctcagcc tctccttctt catogttaca tctctaggct  
 240  
 gcacctgctc tctaaacatt cacacaaacc ctgcaaattt tcttctcat aattgggaga  
 300  
 agactcactg gccgaatggc agcagtagat gacttgcaat ttgaagaatt tggcaatgca  
 360  
 gccacttctc tgacagcaaa ccagatgcc accacagtaa acattgagga tcttggtgaa  
 420

accccaaaac atcagccagg atccccaaga ggctcaggaa gagaagaaga tgatgagtta  
480  
ctgggaaatg atgactctga caaaactgag ttacttgctg gacagaagaa aagctcccc  
540  
ttctggacat ttgaatacta ccaaacattc tttgatgtgg acacctacca ggtctttgac  
600  
agaattaaag gatctctttt gccaatacce gggaaaaact ttgtgaggtt atatatccgc  
660  
agcaatccag atctctatgg ccccttttgg atatgtgcca cgttggtctt tgccatagca  
720  
attagtggga atctttccaa cttcttgatc catctgggag agaagacgta ccattatgtg  
780  
cccgaattcc gaaaagtgtc catagcagct accatcatct atgcctatgc ctggctggtt  
840  
cctcttgcac tctgggggtt cctcatgtgg agaaacagca aagttatgaa catcgtctcc  
900  
tattcatttc tggagattgt gtgtgtctat ggatattccc tcttcattta tatccccacc  
960  
gcaatactgt ggattatccc ccagaaagct gttcgttggg ttctagtcac gattgccttg  
1020  
ggcatctcag gatctctctt ggcaatgaca ttttggccag ctgttcgtga ggataaccga  
1080  
cgcgttgcat tggccacaat tgtgacaatt gtgttgctcc atatgctgct ttctgtgggc  
1140  
tgcttggcat acttttttga tgcaccagag atggaccatc tcccaacaac tacagctact  
1200  
ccaaaccaa cagttgctgc agccaagtcc agctaagag gaaagactca cttgagatac  
1260  
cctctccttg ctgaagtttt tcttgacttc tccagttctc ttttgttttt tggagcatgg  
1320  
ttctttggga agtggcatcc actgcaggaa agcagaatga gcagagccag cagaactgat  
1380  
ggagtggcac aaattcccag tgtctggatg gtgccacact ggcgcctaata caccggttta  
1440  
acaagcagaa attaaatggt gtcagcaca tgtgtctttc agctcttctt tttcaccat  
1500  
ggatgatcat tgcgagcatg cgctgattgg actgaaatgc cggggaatag gttaggcatg  
1560  
ctcagtgcg tcccttttgc accacagtca aatgacatgc ttcactgtgg taccttaata  
1620  
cctgaaatag aaccatggaa aattctgatg tctctctct gaattatgta cagactacat  
1680  
gggggaccc cttctctcca aatgttagcc atcctgaagt agccgaacag tagaaacttt  
1740  
ggtggggatt aaccgggagc ttgaaaattt gtctttggta acctgatact ggacagctga  
1800  
actgaatggc tgcaaaataa atacctcaca tgatgtctgt gtctgcaaaa aaaaaaaaaa  
1860  
aaaaaaaaa aaaaaaaaaa aaaaaaa  
1887

&lt;210&gt; 5536

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5536

Met Ala Ala Val Asp Asp Leu Gln Phe Glu Glu Phe Gly Asn Ala Ala  
 1 5 10 15  
 Thr Ser Leu Thr Ala Asn Pro Asp Ala Thr Thr Val Asn Ile Glu Asp  
 20 25 30  
 Pro Gly Glu Thr Pro Lys His Gln Pro Gly Ser Pro Arg Gly Ser Gly  
 35 40 45  
 Arg Glu Glu Asp Asp Glu Leu Leu Gly Asn Asp Asp Ser Asp Lys Thr  
 50 55 60  
 Glu Leu Leu Ala Gly Gln Lys Lys Ser Ser Pro Phe Trp Thr Phe Glu  
 65 70 75 80  
 Tyr Tyr Gln Thr Phe Phe Asp Val Asp Thr Tyr Gln Val Phe Asp Arg  
 85 90 95  
 Ile Lys Gly Ser Leu Leu Pro Ile Pro Gly Lys Asn Phe Val Arg Leu  
 100 105 110  
 Tyr Ile Arg Ser Asn Pro Asp Leu Tyr Gly Pro Phe Trp Ile Cys Ala  
 115 120 125  
 Thr Leu Val Phe Ala Ile Ala Ile Ser Gly Asn Leu Ser Asn Phe Leu  
 130 135 140  
 Ile His Leu Gly Glu Lys Thr Tyr His Tyr Val Pro Glu Phe Arg Lys  
 145 150 155 160  
 Val Ser Ile Ala Ala Thr Ile Ile Tyr Ala Tyr Ala Trp Leu Val Pro  
 165 170 175  
 Leu Ala Leu Trp Gly Phe Leu Met Trp Arg Asn Ser Lys Val Met Asn  
 180 185 190  
 Ile Val Ser Tyr Ser Phe Leu Glu Ile Val Cys Val Tyr Gly Tyr Ser  
 195 200 205  
 Leu Phe Ile Tyr Ile Pro Thr Ala Ile Leu Trp Ile Ile Pro Gln Lys  
 210 215 220  
 Ala Val Arg Trp Ile Leu Val Met Ile Ala Leu Gly Ile Ser Gly Ser  
 225 230 235 240  
 Leu Leu Ala Met Thr Phe Trp Pro Ala Val Arg Glu Asp Asn Arg Arg  
 245 250 255  
 Val Ala Leu Ala Thr Ile Val Thr Ile Val Leu Leu His Met Leu Leu  
 260 265 270  
 Ser Val Gly Cys Leu Ala Tyr Phe Asp Ala Pro Glu Met Asp His  
 275 280 285  
 Leu Pro Thr Thr Thr Ala Thr Pro Asn Gln Thr Val Ala Ala Ala Lys  
 290 295 300  
 Ser Ser  
 305

&lt;210&gt; 5537

&lt;211&gt; 2881

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5537

gcctgectct tccagagaga ctccccatt gctgtctctt gtgtgtgtca tgcacaagga  
 60  
 aggttggtt gtgtgccagg ataaggggca caagggcctc ggggtgtggc agagacccca  
 120



tgcttaagct tttatggat aggtcaggct gcaggggttt gagggcctca gttgtatatc  
180  
agaatcttca gagcactgcg atgttcagggt gtgagtcagg tctgtagatg tgcacggggg  
240  
cttctgaagg gtcagtttct gtaatcactt tcagggtgtg cagggccttg tgcagtaaca  
300  
gtgcacacag aagtttagtg ttctgtgggc taagggttgt agctctgtat caggattctg  
360  
ggagtgggtc tggatttctg gtgtgtggac ttaagaagct gtgtcagact tgggggaggg  
420  
gcgttcatgt ataactgggt tcacataggc caagactccc aggtgcattt taggcagagc  
480  
ctcagggtgtg ttagagggtcc caggggcaga gaggctatag gtgctgtcag aggccttggg  
540  
gacatttagg gcagagcctc gaggacaggt tcctgggaca gtgggagcca agggcaagtg  
600  
ctagagttgc agtgaattta gagcaaagcc tcagctaagt gacacatccc agggcagtag  
660  
gggatctatc taggttcgtg ctgggcctca ggtaagtgac aggccttagg acaatggggg  
720  
ctgtggcatg cgtcagggtta cctgccttga tatgggateg tgacaggccc ctccctatgt  
780  
gcaggagaca agcagcccaa gaaacaggag aaaaaccag tgttggtgtc cccagagttt  
840  
gtggatgaag ctctgtgtgc gtgcgaggag taccttagca acttggtcca catggacatc  
900  
gacaaggacc tggaggcccc gctgtacctc acccccagg gctggtccct ctccctccag  
960  
cgctactacc aagtgggtcca cgaaggggca gaactcaggc acctcgacac tcagggtccag  
1020  
cgctgtgagg acatcctgca gcagctgcag gccgtgttac cccagataga catggaaggg  
1080  
gatcgcaaca tctggatcgt gaagccagga gccaaagccc gtggacgagg catcatgtgc  
1140  
atggaccacc tggaggagat gctgaagctg gtgaacggca accccgtggt gatgaaggac  
1200  
ggcaagtggg tgggtgcagaa gtatatagag cggccctcc tcactcttgg caccaagttt  
1260  
gacctcagac agtgggttct ggtaactgac tggaaaccac ttaccgtgtg gttctaccgc  
1320  
gacagctata tccgcttttc cagcgagccc ttctccctga agaacctgga caactcagtg  
1380  
cacctgtgca acaactccat ccagaagcac ctggagaact catgccatcg gcatccactg  
1440  
cttccgcccag acaacatgtg gtctagccag aggttccagg cccacctgca ggagatgggt  
1500  
gccccaaatg cttgggtccac catcatcgtg cctggcatga aggatgctgt gatccacgca  
1560  
cttcagacct cccaggacac cgtgcagtgt cggaaggcca gctttgagct ctatggcgct  
1620  
gacttcgtgt tcggggagga cttccagccc tggctgattg agatcaacgc cagccccacg  
1680  
atggcacctt ccacagcagt cactgcccgg ctctgtgtgt gcgtgcaagc tgacacctgt  
1740

cgcgtgggtca ttgaccggag gctggaccgc aactgtgaca caggagcctt tgagctcatc  
 1800  
 tataagcagc ccgtcaccac ttccccagcc tccacaccaa ggcccagctg ccttctcccc  
 1860  
 atgtactccg acaccagggc caggtctctca gacgacagca cagcaagctg gtgggcacta  
 1920  
 aggcctctgc gaccacaggc aaggccttga ggactctacc cacggctaag gtcttcattt  
 1980  
 ccctcccacc gaaccttgat ttcaagggtg caccagcat cctgaagcca agaaagggtg  
 2040  
 gcctcgacct gtgactcaca ccagtgagc agtgctgagc acgggggtcag ggctggaggg  
 2100  
 cacaggcaga gggcagctcc caggtgggtt ggcaccccaa gggaagagct ggtctccctc  
 2160  
 agaagcccct tctccacag attctgata atctccctct tctccctcc tttcacaccg  
 2220  
 aggtctctgc tctctgtgc ctccaggcc ccagctgga agtgcttgt tgcctctgcc  
 2280  
 ctttgaagtc ggaacaattc ctacacctg tcggaaggtc aaggccaaag gcaaattcaa  
 2340  
 ggccagactg tgacaaaccc agggctgagg cctgccccat gaagaggctg agccccctga  
 2400  
 aacccctgcc cttgtttggt acattccaga ggccagggg cctgggggat atgaagctag  
 2460  
 ggaagcccct gcttcgattc cccactgcc ttgtctgga tccaacacca aataaaaaga  
 2520  
 aacaagtga gtatttggg cttgactcca ttgtgttgg agggtaaga gtggatggg  
 2580  
 cgaggccgtg taccacagg tccacagcaa gagcctgagg ccatcagcag ctctccgtg  
 2640  
 cagcgaggcc cagaattccc acctaggac agacatggg ctctctattt agggactccc  
 2700  
 ccagcatctc cgatccagg gtggggagcg tgagccttca ctttacagat gaagaaactg  
 2760  
 agtctgaaag aggaggcatg gcttacccta gatcacgtg cagtgagtc acgcagggac  
 2820  
 atattgccag aactgccgag cactgggagc cccccaacc cagagaacaa gccaaagctag  
 2880  
 c  
 2881

&lt;210&gt; 5538

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5538

Met Asp Ile Asp Lys Asp Leu Glu Ala Pro Leu Tyr Leu Thr Pro Glu  
 1 5 10 15  
 Gly Trp Ser Leu Phe Leu Gln Arg Tyr Tyr Gln Val Val His Glu Gly  
 20 25 30  
 Ala Glu Leu Arg His Leu Asp Thr Gln Val Gln Arg Cys Glu Asp Ile  
 35 40 45  
 Leu Gln Gln Leu Gln Ala Val Val Pro Gln Ile Asp Met Glu Gly Asp

50	55	60
Arg Asn Ile Trp Ile Val Lys Pro Gly Ala Lys Ser Arg Gly Arg Gly		
65	70	75
Ile Met Cys Met Asp His Leu Glu Glu Met Leu Lys Leu Val Asn Gly		80
	85	90
Asn Pro Val Val Met Lys Asp Gly Lys Trp Val Val Gln Lys Tyr Ile		95
	100	105
Glu Arg Pro Leu Leu Ile Phe Gly Thr Lys Phe Asp Leu Arg Gln Trp		110
	115	120
Phe Leu Val Thr Asp Trp Asn Pro Leu Thr Val Trp Phe Tyr Arg Asp		125
	130	135
Ser Tyr Ile Arg Phe Ser Thr Gln Pro Phe Ser Leu Lys Asn Leu Asp		140
145	150	155
Asn Ser Val His Leu Cys Asn Asn Ser Ile Gln Lys His Leu Glu Asn		160
	165	170
Ser Cys His Arg His Pro Leu Leu Pro Pro Asp Asn Met Trp Ser Ser		175
	180	185
Gln Arg Phe Gln Ala His Leu Gln Glu Met Gly Ala Pro Asn Ala Trp		190
	195	200
Ser Thr Ile Ile Val Pro Gly Met Lys Asp Ala Val Ile His Ala Leu		205
	210	215
Gln Thr Ser Gln Asp Thr Val Gln Cys Arg Lys Ala Ser Phe Glu Leu		220
225	230	235
Tyr Gly Ala Asp Phe Val Phe Gly Glu Asp Phe Gln Pro Trp Leu Ile		240
	245	250
Glu Ile Asn Ala Ser Pro Thr Met Ala Pro Ser Thr Ala Val Thr Ala		255
	260	265
Arg Leu Cys Ala Gly Val Gln Ala Asp Thr Leu Arg Val Val Ile Asp		270
	275	280
Arg Arg Leu Asp Arg Asn Cys Asp Thr Gly Ala Phe Glu Leu Ile Tyr		285
	290	295
Lys Gln Pro Val Thr Thr Ser Pro Ala Ser Thr Pro Arg Pro Ser Cys		300
305	310	315
Leu Leu Pro Met Tyr Ser Asp Thr Arg Ala Arg Ser Ser Asp Asp Ser		320
	325	330
Thr Ala Ser Trp Trp Ala Leu Arg Pro Cys Arg Pro Gln Ala Arg Pro		335
	340	345
		350

&lt;210&gt; 5539

&lt;211&gt; 1887

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5539

```

nntttagaag gttagtgttg gttcttgtat tcgattaaac aggaatacac atatgtctac
60
caaagaatag gtaagggaga aataagaaca ctaaaaaaac tcggaatcgt taagtgtgaa
120
gcatatttgg agttaaaga accaaatatt actaagtaag cagacgcggg cacgcgctgc
180
ataccgggat ttgtagtccc ttccggggcg gggtacagcg cgctgcgca gaggggccgt
240
cgctttccg ggcgcgatgcg tgcggcagcg gcgccaggac tgactgcgcc gtggaggctg
300

```

ctgcagtgtt gtgagttgga agctggggag ctcgcatgg cggtccccgc tgcagccatg  
360  
gggccctcgg cgttgggcca gaggggcccc ggctcgatgg ccccggtggtg ctgagtggc  
420  
agcggcccggt cgcgctacgt gcttgggatg caggagctgt tccggggcca cagcaagacg  
480  
cgcgagttcc tggcgcacag cgccaagggtg cactcggtgg cctggagttg cgacgggctg  
540  
cgcctagcct cggggtcctt cgacaagacg gccagcgtct tcttctgga gaggaccggt  
600  
tggtcaaaga aaacaattat cggggacatg gggatangtg tggaccagct ttgttggcat  
660  
ccaagtaatc ctgacctatt tggtacggcg tccggagata aaaccattcg catctgggat  
720  
gtgaggacta caaaatgcat tgccactgtg aacactaaag gggagaacat taatatctgc  
780  
tggagtcttg atgggcagac cattgctgta ggcaacaagg atgatgtggt gacctttatt  
840  
gatgccaaga cacaccgttc caaagcagaa gaggcagttca agttcgaggt caacgaaatc  
900  
tcttgaaca atgacaataa tatgttcttc ctgacaaatg gcaatggttg tatcaacatc  
960  
ctcagctacc cagaactgaa gcctgtgcag tccatcaacg cccatccttc caactgcac  
1020  
tgtatcaagt ttgaccccat ggggaagtac tttgccacag gaagtgcaga tgctttggct  
1080  
agcctctggg atgtggatga gttagtgtgt gttcggtgct tttccaggct ggattggcct  
1140  
gtaagaacct tcagtttcag ccatgatggg aaaatgctgg cgtcagcatc ggaagatcat  
1200  
tttattgaca ttgctgaagt ggagacaggg gacaaaactat gggaggtaca gtgtgagctc  
1260  
ccgaccttca cagtggcgtg gcaccccaaa aggcctctgc tggcatttgc ctgtgatgac  
1320  
aaagacggca aatatgacag cagccgggaa gccggaactg tgaagctggt tgggcttctt  
1380  
aatgattctt gagaggaggt tgtagggaga ggaggccccg gcagaggtct tccttcatgt  
1440  
ggttagtttg gtctgttctc tcggagttgg tgggcacctt aaatatattg aagttggat  
1500  
aaattgtaaa cgtctctggt caggctgcgc atttcgttct tttgctttgt ctgtgtatta  
1560  
gctctttcca ttctttgccc ccagcatgag ttaactcgcg tggactctgc agtgcgagta  
1620  
gtgacccag cataccttgt cctctggacc tctgtcttc tctgcttctg ggtgcatggt  
1680  
agactttgtg gcatttgata caacttgac aatacctagt ttggaggag gggaatggaa  
1740  
gggcatggaa gtttttttaa ataattaaaa aaatatatat ataattttga gaattgagca  
1800  
tttaataaac tgacttttgt tattatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1860  
aaaaaaaaaa aaaaaaaaaa aaaaaaa  
1887

<210> 5540  
 <211> 378  
 <212> PRT  
 <213> Homo sapiens

<400> 5540

```

Met Arg Ala Ala Ala Pro Gly Leu Thr Ala Pro Trp Arg Leu Leu
 1           5           10           15
Gln Cys Cys Glu Leu Glu Ala Gly Glu Leu Gly Met Ala Val Pro Ala
      20           25           30
Ala Ala Met Gly Pro Ser Ala Leu Gly Gln Ser Gly Pro Gly Ser Met
      35           40           45
Ala Pro Trp Cys Ser Val Ser Ser Gly Pro Ser Arg Tyr Val Leu Gly
      50           55           60
Met Gln Glu Leu Phe Arg Gly His Ser Lys Thr Arg Glu Phe Leu Ala
      65           70           75           80
His Ser Ala Lys Val His Ser Val Ala Trp Ser Cys Asp Gly Arg Arg
      85           90           95
Leu Ala Ser Gly Ser Phe Asp Lys Thr Ala Ser Val Phe Leu Leu Glu
      100          105          110
Arg Thr Gly Trp Ser Lys Lys Thr Ile Ile Gly Asp Met Gly Ile Xaa
      115          120          125
Val Asp Gln Leu Cys Trp His Pro Ser Asn Pro Asp Leu Phe Val Thr
      130          135          140
Ala Ser Gly Asp Lys Thr Ile Arg Ile Trp Asp Val Arg Thr Thr Lys
      145          150          155          160
Cys Ile Ala Thr Val Asn Thr Lys Gly Glu Asn Ile Asn Ile Cys Trp
      165          170          175
Ser Pro Asp Gly Gln Thr Ile Ala Val Gly Asn Lys Asp Asp Val Val
      180          185          190
Thr Phe Ile Asp Ala Lys Thr His Arg Ser Lys Ala Glu Glu Gln Phe
      195          200          205
Lys Phe Glu Val Asn Glu Ile Ser Trp Asn Asn Asp Asn Asn Met Phe
      210          215          220
Phe Leu Thr Asn Gly Asn Gly Cys Ile Asn Ile Leu Ser Tyr Pro Glu
      225          230          235          240
Leu Lys Pro Val Gln Ser Ile Asn Ala His Pro Ser Asn Cys Ile Cys
      245          250          255
Ile Lys Phe Asp Pro Met Gly Lys Tyr Phe Ala Thr Gly Ser Ala Asp
      260          265          270
Ala Leu Val Ser Leu Trp Asp Val Asp Glu Leu Val Cys Val Arg Cys
      275          280          285
Phe Ser Arg Leu Asp Trp Pro Val Arg Thr Leu Ser Phe Ser His Asp
      290          295          300
Gly Lys Met Leu Ala Ser Ala Ser Glu Asp His Phe Ile Asp Ile Ala
      305          310          315          320
Glu Val Glu Thr Gly Asp Lys Leu Trp Glu Val Gln Cys Glu Ser Pro
      325          330          335
Thr Phe Thr Val Ala Trp His Pro Lys Arg Pro Leu Leu Ala Phe Ala
      340          345          350
Cys Asp Asp Lys Asp Gly Lys Tyr Asp Ser Ser Arg Glu Ala Gly Thr
      355          360          365
Val Lys Leu Phe Gly Leu Pro Asn Asp Ser

```

370

375

&lt;210&gt; 5541

&lt;211&gt; 1854

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5541

nncgagctgg cagctccagg ctccggagcc atgccctgca cggaccctcg tctttaccac  
60  
gctcctgagg aatgaaagga acccagggac cctcagaagg cagcagtgat gcggaccaac  
120  
cccccgagc ctgcaccctt ccgagggcca taggcgaccc agggaaactgg agagagctcc  
180  
agaaaggaaa tcccagcttt cccaaagtcc ctgtggatgc tgacaaaagg agacctgaat  
240  
ttttggaaga gctgtacta gggtaccgg ctgcagagtg atttccct cgggcaactga  
300  
ctctccccct ccaaccccca gccgtccaga gtaccatgaa gaattatgag gatgtgtgac  
360  
agaggtatcc agatgttgat caccactgta ggagcctttg ccgcttttag ttaaatgacc  
420  
attgcagtgg gcacggacta ctgggtatat tccagagggtg tgtgcaggac taaatctaca  
480  
agtgataatg aaaccagcag gaagaatgaa gaagtaatga cccattcggg gctgtggagg  
540  
acctgctgcc tagaaggggc ttccgaggc gtgtgcaaga aaatcgatca ctccctgaa  
600  
gatgctgact acgaacagga cacagccgaa tatctctgc gagctgtgag ggctccagt  
660  
gtcttcccca tctcagtggt cagctgctg ttcttcggcg ggctctgctt ggcagccagt  
720  
gagttccacc gcagcagaca caacgtcatt ctacgcgagg gcattctttt tgtctctgca  
780  
gggttaagca acatcattgg catcatagtt tatatatcag ccaacgcgg agaccccg  
840  
cagcgtgact ccaaaaaag ttactcctat gggttggtcct tttatttcgg agccttctct  
900  
ttcatcatcg cagaaattgt aggagtgggt gccgtgcaca tctatatgaa aaaacatcag  
960  
cagttacgag ccaaatecca ctccgagttc ctgaagaaat ctacttttgc ccgctccca  
1020  
ccctacaggt atcgattccg gaggcgggtc agttctcgt ccaccgagcc cagatcccga  
1080  
gacctgtccc ccatcagcaa aggttccac accatccctt ccaactgacat ctcatgttc  
1140  
acctctccc gggacccctc aaagatcacc atggggaccc tctcaactc cgaccgggac  
1200  
cacgttttc tacagttcca caattccaca ccaaagagt tcaaagagtc actgcataat  
1260  
aatccggcca acaggcgac cacgcccgtc tgaactgacc tctgacctt gcccacgcc  
1320  
cagcacagcc ttgggggaag tgtacagaga tgtctctgag gttgcatggc atggtccttg  
1380

tgatgggtatt actttttaca aagaatgaaa ccaaattggac tcagccctct cccacatttt  
 1440  
 cccctcacc cccaagtcct aaccctccca tcctctctaa cttttcaagc caatccctta  
 1500  
 atgtcattcc tctctctgtg tatctgtgcc agatgttttc ctttcttctt tctttactgg  
 1560  
 aaggacctcc acattcttcc ctcttggaa gaggacttta ctaaaagtca cagggtggtgg  
 1620  
 ccagggggga ttccgaatc tccatcaggc gcgtcatag ttgtcccat tgtctacca  
 1680  
 cacaaatcct caggaaacca accaccgcc aggtggccct gagggaggca ttcaccttta  
 1740  
 tgtgttagaa aaacatgacc agaaatcaaa gatgtcagag ccccgaagca gctaattgaa  
 1800  
 taagcactca tgttattaaa ggttttgcct tgtcgtacc aaccgaaaaa aaaa  
 1854

<210> 5542

<211> 315

<212> PRT

<213> Homo sapiens

<400> 5542

Met	Arg	Met	Cys	Asp	Arg	Gly	Ile	Gln	Met	Leu	Ile	Thr	Thr	Val	Gly
1			5					10						15	
Ala	Phe	Ala	Ala	Phe	Ser	Leu	Met	Thr	Ile	Ala	Val	Gly	Thr	Asp	Tyr
		20						25					30		
Trp	Leu	Tyr	Ser	Arg	Gly	Val	Cys	Arg	Thr	Lys	Ser	Thr	Ser	Asp	Asn
	35					40					45				
Glu	Thr	Ser	Arg	Lys	Asn	Glu	Val	Met	Thr	His	Ser	Gly	Leu	Trp	
	50				55					60					
Arg	Thr	Cys	Cys	Leu	Glu	Gly	Ala	Phe	Arg	Gly	Val	Cys	Lys	Lys	Ile
65				70					75					80	
Asp	His	Phe	Pro	Glu	Asp	Ala	Asp	Tyr	Glu	Gln	Asp	Thr	Ala	Glu	Tyr
			85					90					95		
Leu	Leu	Arg	Ala	Val	Arg	Ala	Ser	Ser	Val	Phe	Pro	Ile	Leu	Ser	Val
		100					105					110			
Thr	Leu	Leu	Phe	Phe	Gly	Gly	Leu	Cys	Val	Ala	Ala	Ser	Glu	Phe	His
	115					120						125			
Arg	Ser	Arg	His	Asn	Val	Ile	Leu	Ser	Ala	Gly	Ile	Phe	Phe	Val	Ser
	130				135						140				
Ala	Gly	Leu	Ser	Asn	Ile	Ile	Gly	Ile	Ile	Val	Tyr	Ile	Ser	Ala	Asn
145				150						155				160	
Ala	Gly	Asp	Pro	Gly	Gln	Arg	Asp	Ser	Lys	Lys	Ser	Tyr	Ser	Tyr	Gly
		165						170					175		
Trp	Ser	Phe	Tyr	Phe	Gly	Ala	Phe	Ser	Phe	Ile	Ile	Ala	Glu	Ile	Val
		180					185					190			
Gly	Val	Val	Ala	Val	His	Ile	Tyr	Ile	Glu	Lys	His	Gln	Gln	Leu	Arg
	195					200					205				
Ala	Lys	Ser	His	Ser	Glu	Phe	Leu	Lys	Lys	Ser	Thr	Phe	Ala	Arg	Leu
	210				215						220				
Pro	Pro	Tyr	Arg	Tyr	Arg	Phe	Arg	Arg	Arg	Ser	Ser	Ser	Arg	Ser	Thr
225					230					235				240	
Glu	Pro	Arg	Ser	Arg	Asp	Leu	Ser	Pro	Ile	Ser	Lys	Gly	Phe	His	Thr

4724



gttgagatca caggtgccgg gcctggggcg tcgtccgtgt gtaacagcgc acccggtccc  
1200  
ggccccagct ctcccaacag ctcccacagc accatcgctg agaatggctt tactggctca  
1260  
gtccccaaca tcccactga gatgetccct cagcaccgag cctccctct ggacagctcc  
1320  
cccaaccagt tcagctcta cagttctct tctctgcca acatctccct agggctgcag  
1380  
gccacggta ctgtcaccaa ctcacacctc actgcctccc cgaagctgtc gacacagcag  
1440  
gaggccgaga ggcaggccct ccagtccttg cggcagggtg gcacgctgac cggcaagttc  
1500  
atgagacat cctctattcc tggctgctg ctgggctgtg cactggaggg cgacgggagc  
1560  
ccccacgggc atgctccct gctgcagcat gtgctgttg tggagcaggc ccggcagcag  
1620  
agcaccctca ttgctgtgcc actccacggg cagtccccac tagtgacggg tgaacgtgtg  
1680  
gccaccagca tgcggacggg aggcaagctc ccggggcatc ggcccctgag ccgcactcag  
1740  
tcctaccgc tgcgcagag tcccaggcc ctgcagcagc tggatcatga acaacagcac  
1800  
cagcagttcc tggagaagca gaagcagcag cagctacagc tgggcaagat cctaccaag  
1860  
acagggggagc tgcccaggca gccaccacc caccctgagg agacagagga ggagctgacg  
1920  
gagcagcagg aggtcttgct gggggaggga gccctgacca tgccccggga gggtccaca  
1980  
gagagtgaga gcacacagga agacctggag gaggaggacg aggaagagga tggggaggag  
2040  
gaggaggatt gcatccaggg taaggacgag gagggcgaga gtggtgctga ggaggggcc  
2100  
gacttgagg agcctggtgc tggatacaaa aaactgttct cagatgcca gccgctgacg  
2160  
cctttgcagg tgtaccaggc gccctcagc ctggccactg tgccccacca ggccctgggc  
2220  
cgtaccagc cctccctgc tgcctctggg ggcataaga gccccccaga ccagccctc  
2280  
aagcacctct tcaccacagg tgtggtctac gacacgttca tgctaaagca ccagtgcag  
2340  
tgcggaaca cacacgtgca cctgagcat gctggccgga tccagagcat ctggtcccg  
2400  
ctgcaggaga caggcctgct tagcaagtgc gacggatcc gaggtcgcaa agccacgta  
2460  
gatgagatcc agacagtga ctctgaatac cacacctgc tctatgggac cagtccctc  
2520  
aaccggcaga agctagacag caagaagttg ctcgccccca tcagccagaa gatgtatgt  
2580  
gtgctgcctt gtgggggcat cggggtggac agtgacaccg tgtggaatga gatgactcc  
2640  
tcagtgctg tgcgcatggc agtgggctgc ctgctggagc tggcctcaa ggtggctga  
2700  
ggagagctca agaatggatt tgccatcatc cggccccag gacaccagc cgaggaatcc  
2760

acagccatgg gattctgctt cttcaactct gtagccatca ccgcaaaact cctacagcag  
 2820  
 aagttgaacg tgggcaaggt cctcatcggt gactgggaca ttcaccatgg caatggcacc  
 2880  
 cagcaggcgt tctacaatga cccctctgtg ctctacatct ctctgcatcg ctatgacaac  
 2940  
 gggaacttct ttccaggctc tggggctcct gaagaggttg gtggaggacc aggcgtgggg  
 3000  
 tacaatgtga acgtggcatg gacaggaggt gtggaccccc ccattggaga cgtggaatac  
 3060  
 cttacagcct tcaggacagt ggtgatgccc attgccacg agttctcacc tgatgtggtc  
 3120  
 ctagtctccg ctgggtttga tgetgttgaa ggacatctgt ctccactggg tggctactct  
 3180  
 gtcaccgcca gatgttttgg ccacttgacc aggcagctga tgaccctggc agggggccgg  
 3240  
 gtgggtgctg ccctggaggg aggccatgac ttgaccgcca tctgtgatgc ctctgaggct  
 3300  
 tgtgtctcgg ctctgctcag tgtagagctg cagcccttgg atgaggcagt cttgcagcaa  
 3360  
 aagcccaaca tcaacgcagt ggccacgcta gagaaagtca tcgagatcca gagcaaacac  
 3420  
 tggagctgtg tgcagaagtt cgccgctggg ctgggcccgt ccctgcgaga ggcccaagca  
 3480  
 ggtgagaccg aggaggccga gactgtgagc gccatggcct tgctgtcggg gggggccgag  
 3540  
 caggccccagg ctgcggcagc ccgggaacac agccccaggc cggcagagga gcccatggag  
 3600  
 caggagcctg ccctgtgacg ccccgccccc catccctctg ggcttcacca ttgtgatttt  
 3660  
 gtttattttt tctattaaaa acaaaaagtc acacattcaa caaggtgtgc cgtgtgggtc  
 3720  
 tctcagcctt gcccctctg ctccctctacg ctgcctcagg ccccagccc tgtggcttcc  
 3780  
 acctcagctc tagaagcctg ctccctctgc aggggggtgg ggtgtcttcc cagccctgtc  
 3840  
 ccattgtgtc ctccacccat tttctgcat tctgtctgtc ctttctctcc ttggagcctg  
 3900  
 ggccagctca aggtgggcac gggggcccag acagtactct ccagttctgg ggcccccca  
 3960  
 gtgaggaggg aacgggaagt cgggtgcctg gtttcagctg attttggggg gaaatgcctt  
 4020  
 a  
 4021

&lt;210&gt; 5544

&lt;211&gt; 1141

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5544

Met Leu Leu Val Pro Lys Ala Gln Gly Leu Val Glu Met Leu Gln Thr

1

5

10

15

Ile Tyr Glu Thr Glu Ser Cys Phe Ser Ala Asp Gly Met Ser Gly Arg

4727

450		455		460
Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu Ile				
465		470		475
Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg Val				480
	485		490	495
Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro Leu				
	500		505	510
Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu Gln				
	515		520	525
Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln Lys				
	530		535	540
Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu Leu				
545		550		555
Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu Thr				560
	565		570	575
Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro Arg				
	580		585	590
Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu Glu				
	595		600	605
Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val Lys				
	610		615	620
Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu Glu				
625		630		635
Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu Gln				640
	645		650	655
Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro His				
	660		665	670
Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly Met				
	675		680	685
Lys Ser Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Gly Val				
	690		695	700
Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn Thr				
705		710		715
His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg				
	725		730	735
Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly Arg				
	740		745	750
Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His Thr				
	755		760	765
Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser Lys				
	770		775	780
Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro Cys				
785		790		795
Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His Ser				
	805		810	815
Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala Phe				
	820		825	830
Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg Pro				
	835		840	845
Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe Phe				
	850		855	860
Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn Val				
865		870		875
Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly Thr				880

	885		890		895
Gln Gln Ala Phe Tyr Asn Asp Pro Ser Val Leu Tyr Ile Ser Leu His					
	900		905		910
Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu Glu					
	915		920		925
Val Gly Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp Thr					
	930		935		940
Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala Phe					
	945		950		955
Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val Val					
	965		970		975
Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro Leu					
	980		985		990
Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg Gln					
	995		1000		1005
Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly Gly					
	1010		1015		1020
His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser Ala					
	1025		1030		1035
Leu Leu Ser Val Glu Leu Gln Pro Leu Asp Glu Ala Val Leu Gln Gln					
	1045		1050		1055
Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu Ile					
	1060		1065		1070
Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu Gly					
	1075		1080		1085
Arg Ser Leu Arg Glu Ala Gln Ala Gly Glu Thr Glu Glu Ala Glu Thr					
	1090		1095		1100
Val Ser Ala Met Ala Leu Leu Ser Val Gly Ala Glu Gln Ala Gln Ala					
	1105		1110		1115
Ala Ala Ala Arg Glu His Ser Pro Arg Pro Ala Glu Glu Pro Met Glu					
	1125		1130		1135
Gln Glu Pro Ala Leu					
	1140				

&lt;210&gt; 5545

&lt;211&gt; 1932

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5545

```

nncccagttt ctcagtgtcc ctgagcctca gttttctcat ctataaataa gaatcgcttg
60
aacctgggag gcgagggttg cgctaacca gatcgcgcca ttgactcca gcctgggtga
120
caggagtga actctgtatc aaaaagaaat aaaaaaacga ggtcaagtag taagagaagc
180
ggtaagagtg acgggaacag gagtcattga cctcttgga gaggagacat tggaggtggt
240
gatgatttc tgaagcagcc acacacgttc agcttgtgag gacagcagtt gttaggcagg
300
ggatgaggga ggaagctggc agatctgtgc aggtgagagg tacctgtggc cttgggctca
360
tggaagtggg aggtgatggg attctaattgt gcttggttac agtttacaaa tacaacctct
420

```

cttagtttgc ccaatacctc caaatctctg ggggtggcaca cctgagggttc aggtggcatg  
480  
actgagccac agtcacacat cccactgta ggataccacc acggttgggt taggttccag  
540  
cacatggggg tcccggtctg gcctcttggg cccacctcac ctggtgacta gtgcagacca  
600  
ctctgttctt gcctgtttca ggcagcggag gaggagaaag agatggacct cccggactcg  
660  
gcctcgaggg tcttctgctg ccgcatactg agcatgggtga acacagatga tgtcaacgcc  
720  
atcatcctgg ccagaagaa catgctggac cgctttgaga agaccaatga gatgctgctc  
780  
aacttcaaca acctgtccag tgcccgctg cagcagatga gcgaacgctt cctgcaccac  
840  
acgaggaccc tagtagagat gaaacgggac ctggacagca tcttcgccc tatcaggacg  
900  
ctgaaaggga aactggccag gcagcaccca gaggccttca gccatatccc agaggcatcc  
960  
ttcctggagg aagaggatga agaccccatc ccaccagca ccacgaccac cattgccacc  
1020  
tcagaacaga gcacgggctc atgtgacacc agccccgaca cgtctcgc ctcctgagc  
1080  
cccggtctcg aggacctgtc ccatgtccag cctggctccc cagccatcaa cggccgcagc  
1140  
cagacagatg acgaggagat gacggggcga tagccctgct gcccggtgcc ttgagggggg  
1200  
ctcagggcag cagcatacaa ggtggcagcg ggtaaccctg ccttgttctg tcatccaggg  
1260  
ctcctttgct gcccgttct gtcacccagg gtccttaggg ggacaaggct ctctcccgag  
1320  
gggtgtggaa ttctggggg ggtctttaat tctggctcct tcttctccta gaacatctct  
1380  
attctgcaag acccctctgc catgccaggg cagcccatc ccagctggag tctgagggtg  
1440  
gggcacaggg gaatttttcc agagctgagc ctgacgtctg ctctgaagaa tgcttagaag  
1500  
gttcccagac accagagcca gatgtcccc accaccggtc aggacctcct tgagggtcac  
1560  
aagcacggtc tctctgagt tcacccagc ccaccccgcc accactaat tctgcttttc  
1620  
ctgccccttg ctccgtaaaa gtatcaaata ctttctctt ggtatctcaa ggaggtttct  
1680  
gagataggta gaagtcttga gacggaggct ggccatccat tcagccctga gcgtgctgag  
1740  
ttctgtgttt ctctgaatag aggtgtggaa cctgaggggc cagcaggcct ctctgaaggc  
1800  
ctccatggag caaacggagc cacctcggga aagagtttaa tggaatat ttgtaccgga  
1860  
tgtttacaga tgctgttggg aagttatcaa taaaagaca ccattactaa aaaggga  
1920  
gtaaaaaaaa aa  
1932

&lt;210&gt; 5546

<211> 183  
 <212> PRT  
 <213> Homo sapiens

<400> 5546

Ala Ala Glu Glu Glu Lys Glu Met Asp Leu Pro Asp Ser Ala Ser Arg  
 1 5 10 15  
 Val Phe Cys Gly Arg Ile Leu Ser Met Val Asn Thr Asp Asp Val Asn  
 20 25 30  
 Ala Ile Ile Leu Ala Gln Lys Asn Met Leu Asp Arg Phe Glu Lys Thr  
 35 40 45  
 Asn Glu Met Leu Leu Asn Phe Asn Asn Leu Ser Ser Ala Arg Leu Gln  
 50 55 60  
 Gln Met Ser Glu Arg Phe Leu His His Thr Arg Thr Leu Val Glu Met  
 65 70 75 80  
 Lys Arg Asp Leu Asp Ser Ile Phe Arg Arg Ile Arg Thr Leu Lys Gly  
 85 90 95  
 Lys Leu Ala Arg Gln His Pro Glu Ala Phe Ser His Ile Pro Glu Ala  
 100 105 110  
 Ser Phe Leu Glu Glu Glu Asp Glu Asp Pro Ile Pro Pro Ser Thr Thr  
 115 120 125  
 Thr Thr Ile Ala Thr Ser Glu Gln Ser Thr Gly Ser Cys Asp Thr Ser  
 130 135 140  
 Pro Asp Thr Val Ser Pro Ser Leu Ser Pro Gly Phe Glu Asp Leu Ser  
 145 150 155 160  
 His Val Gln Pro Gly Ser Pro Ala Ile Asn Gly Arg Ser Gln Thr Asp  
 165 170 175  
 Asp Glu Glu Met Thr Gly Glu  
 180

<210> 5547  
 <211> 1391  
 <212> DNA  
 <213> Homo sapiens

<400> 5547

nntgtcctac ggcggacagt ttcgtaccgg cttcttctct ggggtagggg tagcctcgcc  
 60  
 cggaagcaag gcctctggaa aaccgcggcc cctgagttgc aaacaaatgt cagatcccag  
 120  
 atattaaggc taagacatac tgcatttgta ataccaaaga aaaacgttcc tacctcaaaa  
 180  
 cgtgaaactt acacagagga ttttattaaa aagcagattg aagagttcaa cataggaaa  
 240  
 agacatttag ccaacatgat gggagaagat ccagaaactt tcaactcaaga agatattgac  
 300  
 agagctattg cttacctttt cccaagtggg ttgtttgaga aacgagccag gccagtaatg  
 360  
 aagcatcctg aacagatttt tccaagacaa agagcaatcc agtggggaga agatggccgt  
 420  
 ccatttcact atctcttcta tactggcaaa cagtcatact attcattaat gcatgatgta  
 480  
 nntatggaat gttactcaat ttagaaanaa catcaaagtc acttgcaagc caaaagtctg  
 540

cttccagaaa aaactgtaac cagagacgtg attggcagca gatggctgat taaggaggaa  
 600  
 ctagaagaaa tgtagtgga aaaactgtca gatctagatt atatgcagtt cattcggtg  
 660  
 ctagaaaagt tattgacatc gcagtgtggt gctgctgagg aagaatttgt gcagaggttt  
 720  
 cgaagaagtg taactcttga atcaaaaaaa cagctgattg aacctgtaca gtatgatgag  
 780  
 caaggaatgg ccttttagcaa aagcgaaggt aaaagaaaga ctgcaaaagc agaagcaatt  
 840  
 gtttataaac atggaagtgg aagaataaaa gtaaatggaa ttgattacca gctttacttc  
 900  
 ccgatcacac aggacagaga acagctgatg ttccctttcc actttgttga ccggctggga  
 960  
 aagcacgacg tgacctgcac agtctcaggg ggccggagggt cagcgcaggc tggagcaata  
 1020  
 cgactggcaa tggcaaaagc cttgtgcagc tttgtcaccg aggacgaggt cgagtggatg  
 1080  
 agacaagctg gactacttac tactgatcca cgtgtgaggg aacggaagaa gccaggccaa  
 1140  
 gagggagccc gcagaaagt ttcgtggaag aaacgctaag ggtttgctcc caggaaagga  
 1200  
 gaggaagagc tatatatatg tgccgacatg tggcagacac acagtaaata atggctgacc  
 1260  
 agcatgaggg cagtactgtc agaaatttct ttgagctgtg agatggattt atttttaaat  
 1320  
 gctactttgt aaaggtgacc tttaaaaaat aaaaggaaaa taaagaatgt tagtttcaaa  
 1380  
 aaaaaaaaaa a  
 1391

&lt;210&gt; 5548

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5548

Xaa	Val	Leu	Arg	Arg	Thr	Val	Ser	Tyr	Arg	Leu	Leu	Leu	Trp	Gly	Arg
1				5					10					15	
Gly	Ser	Leu	Ala	Arg	Lys	Gln	Gly	Leu	Trp	Lys	Thr	Ala	Ala	Pro	Glu
		20					25					30			
Leu	Gln	Thr	Asn	Val	Arg	Ser	Gln	Ile	Leu	Arg	Leu	Arg	His	Thr	Ala
		35					40				45				
Phe	Val	Ile	Pro	Lys	Lys	Asn	Val	Pro	Thr	Ser	Lys	Arg	Glu	Thr	Tyr
	50					55				60					
Thr	Glu	Asp	Phe	Ile	Lys	Lys	Gln	Ile	Glu	Glu	Phe	Asn	Ile	Gly	Lys
65					70				75					80	
Arg	His	Leu	Ala	Asn	Met	Met	Gly	Glu	Asp	Pro	Glu	Thr	Phe	Thr	Gln
			85					90					95		
Glu	Asp	Ile	Asp	Arg	Ala	Ile	Ala	Tyr	Leu	Phe	Pro	Ser	Gly	Leu	Phe
		100					105						110		
Glu	Lys	Arg	Ala	Arg	Pro	Val	Met	Lys	His	Pro	Glu	Gln	Ile	Phe	Pro
		115				120						125			
Arg	Gln	Arg	Ala	Ile	Gln	Trp	Gly	Glu	Asp	Gly	Arg	Pro	Phe	His	Tyr



130 135 140  
 Leu Phe Tyr Thr Gly Lys Gln Ser Tyr Tyr Ser Leu Met His Asp Val  
 145 150 155 160  
 Xaa Met Glu Cys Tyr Ser Ile  
 165

<210> 5549

<211> 1865

<212> DNA

<213> Homo sapiens

<400> 5549

gcgtcaccga gggccgcgca gactgcgacg gatacagga gggcaagggt ttccttttgg  
 60  
 cgcttccctt tggaccccg agtgaaaaac tctaactcc agatcagtgg agagaaacgc  
 120  
 agatttagga ccctgaggag tctttttcac ccgtttcccg tcaactcgctc aggcgcgcgcg  
 180  
 agggcagtc tttgtggggtc ctctgtggcca gccaatggg ttgccccgc agtgaagggt  
 240  
 gcccgaggat ggtcgggcct ggcgttgggc gtgcggcggg ctgtcttgca gcttccaggg  
 300  
 ctaactcagg tgagatggag ccgctatagt cctgaattca aggatccctt gattgacaag  
 360  
 gaattattatc gcaagccagt ggaggagcta actgaggagg agaaatatgt tcgggagctc  
 420  
 aagaagactc agctcatcaa agctgctcca gcagggaata caagttctgt gtttgaagac  
 480  
 ccagtcatca gtaaatccac caacatgatg atgataggag gaaacaaagt actggccaga  
 540  
 tccctcatga ttcagactct ggaagctgtg aaaaggaagc agtttgagaa gtaccatgcc  
 600  
 gcttctgcag aggaacaggc aaccatcgaa cgcaaccctt acaccatctt ccatcaagca  
 660  
 ctgaaaaact gtgagcctat gattgggctg gtacccatcc tcaaggagg ccgtttctac  
 720  
 caggtcctg taccctacc cgaccggcgt cgcgcttcc tagccatgaa gtggatgatc  
 780  
 actgagtgc gggataaaaa gcaccagcgg aactgatgc cggagaagct gtcacacaag  
 840  
 ctgctggagg ctttccataa ccaggcccc gtgatcaaga ggaagcatga cttgcacaag  
 900  
 atggcagagg ccaaccgtgc cctggccccc taccgctggg ggtagagtct ccaggaggag  
 960  
 cccaggcccc tctgccgcaa gaaacagtgt gagctactgc cacgctgaaa actacctgtg  
 1020  
 ggttaaggat gtagttcctt tgtaagggtg ggcaggcctc gtaagaaaga ttagcagca  
 1080  
 tattcactat ccgttaatcc ttctttcttt gaggetgaa cttgctctct ctgcccctat  
 1140  
 ttccttgtaa agaggagca cattgacttg ggaatttctt ccaggaaact cagggtgtgt  
 1200  
 ttctcttccc ttaggttggg gcggacctt ggacatataa aggaagcagt ttagtatca  
 1260

gaaaagattt attagaaaat tctcacgctg aactggtgta gcatgtggtg cagcattcag  
 1320  
 tgaaactggc tggaggaaat aggcttggtt ccagagttgt ccttatacaa aatgtataaa  
 1380  
 aagcagtttc tgggtgtgact tgtgctctgc ctccaccctt tgacatccca aaatatccca  
 1440  
 ccagtggcta tgcttaccba ttttacagat gggtaaactg aggaccaag gtagtagttg  
 1500  
 cactaatggt tacacagtgc agtggctctt gggagttgcc cttctctgcc tggccgtggt  
 1560  
 ggggttggtt ggggaaaggg gctcagggca ggaccacggc ataagtggga aacatctcac  
 1620  
 caggagatgg gaaagtctag aagggaagac actcaaagtc tggaagggaa aagtctttgg  
 1680  
 gtgaggcaga gactccactg ccagcttttag aggtgggtag aagaaaggcc agtgctggtg  
 1740  
 aggaagccct gatctggagg cctagtcgga gacttcgctg tagtaatact tgtgggcagc  
 1800  
 tggcgttgtc ttccagccgg ccgcccggaa ctcaatgatc tccagcagca gcagctggca  
 1860  
 gggcc  
 1865

&lt;210&gt; 5550

&lt;211&gt; 242

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5550

Met	Val	Ala	Pro	Ala	Val	Lys	Val	Ala	Arg	Gly	Trp	Ser	Gly	Leu	Ala
1				5					10					15	
Leu	Gly	Val	Arg	Arg	Ala	Val	Leu	Gln	Leu	Pro	Gly	Leu	Thr	Gln	Val
			20					25					30		
Arg	Trp	Ser	Arg	Tyr	Ser	Pro	Glu	Phe	Lys	Asp	Pro	Leu	Ile	Asp	Lys
		35				40						45			
Glu	Tyr	Trp	Arg	Lys	Pro	Val	Glu	Glu	Leu	Thr	Glu	Glu	Glu	Lys	Tyr
	50					55					60				
Val	Arg	Glu	Leu	Lys	Lys	Thr	Gln	Leu	Ile	Lys	Ala	Ala	Pro	Ala	Gly
65					70					75				80	
Lys	Thr	Ser	Ser	Val	Phe	Glu	Asp	Pro	Val	Ile	Ser	Lys	Phe	Thr	Asn
			85					90						95	
Met	Met	Met	Ile	Gly	Gly	Asn	Lys	Val	Leu	Ala	Arg	Ser	Leu	Met	Ile
			100					105					110		
Gln	Thr	Leu	Glu	Ala	Val	Lys	Arg	Lys	Gln	Phe	Glu	Lys	Tyr	His	Ala
		115				120						125			
Ala	Ser	Ala	Glu	Glu	Gln	Ala	Thr	Ile	Glu	Arg	Asn	Pro	Tyr	Thr	Ile
	130					135					140				
Phe	His	Gln	Ala	Leu	Lys	Asn	Cys	Glu	Pro	Met	Ile	Gly	Leu	Val	Pro
145					150					155				160	
Ile	Leu	Lys	Gly	Gly	Arg	Phe	Tyr	Gln	Val	Pro	Val	Pro	Leu	Pro	Asp
			165					170					175		
Arg	Arg	Arg	Arg	Phe	Leu	Ala	Met	Lys	Trp	Met	Ile	Thr	Glu	Cys	Arg
			180					185					190		
Asp	Lys	Lys	His	Gln	Arg	Thr	Leu	Met	Pro	Glu	Lys	Leu	Ser	His	Lys

195	200	205
Leu Leu Glu Ala Phe His Asn Gln Gly Pro Val Ile Lys Arg Lys His		
210	215	220
Asp Leu His Lys Met Ala Glu Ala Asn Arg Ala Leu Ala His Tyr Arg		
225	230	235
Trp Trp		240

&lt;210&gt; 5551

&lt;211&gt; 1689

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5551

```

ttttaaatta cattatztat tttttagatc atccctctta gtctgcatg cattgttagc
60
acaaaaagtt gaacttgatc acaacttcct ttgaagagag agtaggtaca caatgaccat
120
ctgaagagtt tctccacgga gggaccaaga attccagacg ctggtaacac tgtcagtaac
180
ctacacaact ttcaatacaa aaaaatttac caaatatcct gtttaatgta aacaaggcag
240
gaggcaaaac agagtattac agtaacacta ttttacaggg cccagaaaat gtgattatct
300
accatgtttt aacacataaa gtgtcacaat gacatgcata tttgatttac tacataaccc
360
aaaatataat taccatatag tgtgggttta gcaacttact gtaacgtctt ctgtcaatac
420
tgatggactt cataattaaa tggcaattgt atgttaatgc aataatttat gaaaacatta
480
ccatgaattt atgaagtaat tccataattt gtgccctgta aaattaagtg taacaatggt
540
tacactagca acagtgtgag cgagctaaga attttggtcc ttatatatat acatatatac
600
atatatacac acacaataat gtacaattaa accaaaaagc tatgaatcca ctcacagctt
660
ccatattgca caaacagata cattacgaga aagttacata gttataaggt gagtactata
720
tggaatagg ctaagacaaa tctgagttct atcaagtaaa gaatgcggct cataactaaa
780
aacaatatcca aagactatat tgtagaaaag ttttaaaaaa tgtgcatatt tattgatata
840
aatgtgaagc aaggctgaaa ttcactttgg aacttgctat ggcaatcaat tggtatgacg
900
gtgctttcca ctcagcatag tgcattttag ttactgtttt tgcaagtact gagtaacaga
960
aatattcagc tgtcaacaga aggtaagaaa aactgggtgat gcagtacaat gtttcactaa
1020
caaattgaac tcaactgtgag agcttctact ggctctaggt ctgaaatagg gccttcaggt
1080
tccaaaccaa gtaaccgctt tctgactaac agaagcttgg gagtaaagtc ttgaatacgc
1140
tggattcgaa gcataaggtc tccaacaacc ctgacaatta cagagaagag agatctacag
1200

```

ccaggagcga gggtcacgta aggatccaaa aggtactcgt ggatgtgtgg atgaggggaag  
 1260  
 agagaaagtc tagataacac tgagggtact tgtaagtta catcatatgg ctgatcaaga  
 1320  
 attcttccca ttctgtcgaa cagcactttc aaaaaatgac cttcaaagaa agcagcttct  
 1380  
 aaattgcact ttccaatgc ttttgagac ccaggccact cccatcttaa gcagatagca  
 1440  
 cagtagtctc ggaactgcct atgagcgtct cggaggtaag tgtcatatcc tgtgccctca  
 1500  
 acatggtagg aggatattgc gtcacccggt accagacaga gaaaactatt tacaatttta  
 1560  
 tgaacttcag tttttccatc atttttgggg tggctcggag tagcaggagg tgaagaacta  
 1620  
 agccactctt gggttgcaa agtggtttct ggtgaaatgt cagtaaataa tggatcttct  
 1680  
 tccagatct  
 1689

&lt;210&gt; 5552

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5552

Met	Gly	Arg	Ile	Leu	Asp	Gln	Pro	Tyr	Asp	Val	Asn	Leu	Gln	Val	Thr
1				5					10				15		
Ser	Val	Leu	Ser	Arg	Leu	Ser	Leu	Phe	Pro	His	Pro	His	Ile	His	Glu
		20						25					30		
Tyr	Leu	Leu	Asp	Pro	Tyr	Val	Asn	Leu	Ala	Pro	Gly	Cys	Arg	Ser	Leu
		35					40					45			
Phe	Ser	Val	Ile	Val	Arg	Val	Val	Gly	Asp	Leu	Met	Leu	Arg	Ile	Gln
		50				55					60				
Arg	Ile	Gln	Asp	Phe	Thr	Pro	Lys	Leu	Leu	Leu	Val	Arg	Lys	Arg	Leu
65					70					75				80	
Leu	Gly	Leu	Glu	Pro	Glu	Gly	Pro	Ile	Ser	Asp	Leu	Glu	Pro	Val	Glu
			85						90					95	
Ala	Leu	Thr	Val	Ser	Ser	Ile	Cys								
			100												

&lt;210&gt; 5553

&lt;211&gt; 274

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5553

ccatggatgg aggccagggt acttcaggac ctctgaagac agcaaagcag tttctggcaa  
 60  
 tctctgagga ggtggcattt gttccagaaa aaaggacccc ccaaccccat cccacagcct  
 120  
 caccagaccc taaagtcaga ataaccggcc cagctacagc ccttgccggtc gtgcttagcc  
 180  
 actacagagg ctgctatttc cccagccagt gtccctggca gccttggaag ccaatgaagc  
 240

aggctctgac acaggaatcc ctctgcatct ttat  
274

<210> 5554

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5554

Met	Asp	Gly	Gly	Gln	Gly	Thr	Ser	Gly	Pro	Leu	Lys	Thr	Ala	Lys	Gln
1				5					10					15	
Phe	Leu	Ala	Ile	Ser	Glu	Glu	Val	Ala	Phe	Val	Pro	Glu	Lys	Arg	Thr
			20					25					30		
Pro	Gln	Pro	His	Pro	Thr	Ala	Ser	Pro	Asp	Pro	Lys	Val	Arg	Ile	Thr
			35				40					45			
Gly	Pro	Ala	Thr	Ala	Pro	Ala	Val	Val	Leu	Ser	His	Tyr	Arg	Gly	Cys
	50					55					60				
Tyr	Phe	Pro	Ser	Gln	Cys	Pro	Trp	Gln	Pro	Trp	Lys	Pro	Met	Lys	Gln
65				70					75					80	
Ala	Leu	Thr	Gln	Glu	Ser	Leu	Cys	Ile	Phe						
			85						90						

<210> 5555

<211> 414

<212> DNA

<213> Homo sapiens

<400> 5555

acgcgtgtgt gcacgcaggc atgggctttc agggctttca gagcaggggc cgacggcatt  
60  
ctccctcggg ccacgggtca gatgtggggt tcaggaaaca aggccaggt ggggatgaat  
120  
cacagggtctg tgattctaga agggacagct gtgaggggcc gggacaggct aagctggagg  
180  
actcaccaga cttgcggggg tcaacacgct ccagatgtct cctagacctc tcacactcag  
240  
cacatccaaa cctgaacca gcacctggcc ccacacctgt ccctggcta gagacggggg  
300  
cctcagccca gctgttcccc ttctcccaca gcctctcagc tgcgtgtcgg gtccattctg  
360  
catcttgaac atctctccca gtggattccc ttctgtgtgc ctggtccagg atcc  
414

<210> 5556

<211> 115

<212> PRT

<213> Homo sapiens

<400> 5556

Met	Gly	Phe	Gln	Gly	Phe	Gln	Ser	Arg	Gly	Arg	Arg	His	Ser	Pro	Ser
1				5					10					15	
Gly	Gln	Arg	Ser	Asp	Val	Gly	Phe	Arg	Lys	Gln	Gly	Pro	Gly	Gly	Asp
			20					25				30			
Glu	Ser	Gln	Gly	Cys	Asp	Ser	Arg	Arg	Asp	Ser	Cys	Glu	Gly	Pro	Gly

```
<210> 5557
<211> 1970
<212> DNA
<213> Homo sapiens
```

<400>	5557				
nnccgcgggct	gggccaaaggc	ccgcgatgggt	gatctgctgt	gcggccgtga	actgctccaa
60					
ccggcagggga	aagggcgaga	agcgcgcctg	ctccttcac	aggttcccc	taaaggactc
120					
aaaacgtcta	atccaatggg	taaaagctgt	tcagagggat	aactggactc	ccactaagta
180					
ttcattttct	tgtagtgagc	atttcaccaa	agacagcttc	tccaagaggc	tggaggacca
240					
gcacgcctg	ctgaagccca	cggccgtgcc	atccatcttc	cacctgaccg	agaagaagag
300					
gggggctgga	ggccatggcc	gcacccggag	aaaagatgcc	agcaagggca	caggggggtgt
360					
gagggggacac	tcgagtgcg	ccaccgcgag	aggagctgca	ggttggtcac	cgctctcgag
420					
tggaaacccg	atggccaagc	cagagtcctg	caggttgaag	caagctgctc	tgcaaggtga
480					
agccacaccc	agggcgcccc	aggagcaggt	ccgaaggagc	aggcccagca	agctcctgga
540					
acggactcca	ggagatggac	tggccaccat	ggtcgaggca	gtcagggaaa	agcagaagcg
600					
tctgccacag	atgctggcga	tgagagcgcc	acttctctca	tcgaaggggg	cgtgacagat
660					
aagagtggca	tttctatgga	tgactttacg	cccccaggat	ctggggcgctg	caaattttatc
720					
ggctcacttc	attcgtagag	tttctcctcc	aagcacaccc	gagaaaggcc	atctgtcccc
780					
cgagagccca	ttgaccgcaa	gaggctgaag	aaagatgtgg	aaccaagctg	cagtggggagc
840					
agcctggggac	ccgacaaggg	cctggcccag	agccctccca	gtcatcact	taccgcgaca
900					
cggcagaagc	cttcccagag	cccctctgcc	cctcctgcg	acgtcacccc	aaagccagcc
960					
acggaagccg	tgcagagcga	gcacagcgac	gccagcccca	tgtccatcaa	cgagggtcatc
1020					
ctgtcggcgt	caggggcctg	caagctcatc	gactcactgc	actcctactg	cttctctctc
1080					

cggcagaaca agagccaggt gtgctgcctg cgggagcagg tggagaagaa gaacggcgag  
 1140  
 ctgaagagcc tgcggcagag ggtcagccgc tccgacagcc aggtgcggaa gctacaggag  
 1200  
 aagctggatg agctgaggag agtgagcgtc ccctatccaa gtagcctgct gtcgcccagc  
 1260  
 cgcgagcccc ccaagatgaa cccagtgggt gagecactgt cctggatgct gggcacctgg  
 1320  
 ctgtcggacc cacctggagc cgggacctac cccacactgc agcccttcca gtacctggag  
 1380  
 gaggttcaca tctcccaagt gggccagccc atgctgaact tctcgttcaa ctccttccac  
 1440  
 ccggacacgc gcaagccgat gcacagagag tgtggcttca ttcgcctcaa gcccacacc  
 1500  
 aacaaggtgg cctttgtcag cgcacagaac acaggcgtgg tggaagtgga ggagggcgag  
 1560  
 gtgaacgggc aggagctgtg catcgcatcc cactccatcg ccaggatctc cttcgccaag  
 1620  
 gagccccacg tagagcagat cacccggaag ttcaggctga attctgaagg caaacttgag  
 1680  
 cagacggtct ccatggcaac cagcacacag ccaatgactc agcatcttca cgtcacctac  
 1740  
 aagaaggtga ccccgtaaac ctagagcttc tggagccctc gggagggcct ggctactgtg  
 1800  
 cctcaacggt tcggctcctc aacagacagt cctgcggca gaagtgggtg tggecgtgag  
 1860  
 cctctgcagg ctcaagagtg ttgtccagat gttctgtac tggcatagaa aaaccaaata  
 1920  
 aaaggccttt atttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1970

&lt;210&gt; 5558

&lt;211&gt; 360

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5558

Met	Asp	Asp	Phe	Thr	Pro	Pro	Gly	Ser	Gly	Ala	Cys	Lys	Phe	Ile	Gly
1				5					10					15	
Ser	Leu	His	Ser	Tyr	Ser	Phe	Ser	Ser	Lys	His	Thr	Arg	Glu	Arg	Pro
			20					25					30		
Ser	Val	Pro	Arg	Glu	Pro	Ile	Asp	Arg	Lys	Arg	Leu	Lys	Lys	Asp	Val
		35					40					45			
Glu	Pro	Ser	Cys	Ser	Gly	Ser	Ser	Leu	Gly	Pro	Asp	Lys	Gly	Leu	Ala
	50				55						60				
Gln	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ala	Thr	Arg	Gln	Lys	Pro	Ser
65				70					75					80	
Gln	Ser	Pro	Ser	Ala	Pro	Pro	Ala	Asp	Val	Thr	Pro	Lys	Pro	Ala	Thr
			85					90						95	
Glu	Ala	Val	Gln	Ser	Glu	His	Ser	Asp	Ala	Ser	Pro	Met	Ser	Ile	Asn
		100					105					110			
Glu	Val	Ile	Leu	Ser	Ala	Ser	Gly	Ala	Cys	Lys	Leu	Ile	Asp	Ser	Leu
		115					120					125			
His	Ser	Tyr	Cys	Phe	Ser	Ser	Arg	Gln	Asn	Lys	Ser	Gln	Val	Cys	Cys

130		135		140
Leu Arg Glu Gln Val	Glu Lys Lys Asn Gly	Glu Leu Lys Ser Leu Arg		
145	150	155	160	
Gln Arg Val Ser Arg	Ser Asp Ser Gln Val Arg	Lys Leu Gln Glu Lys		
	165	170	175	
Leu Asp Glu Leu Arg	Arg Val Ser Val Pro Tyr	Pro Ser Ser Leu Leu		
	180	185	190	
Ser Pro Ser Arg Glu	Pro Pro Lys Met Asn Pro	Val Val Glu Pro Leu		
	195	200	205	
Ser Trp Met Leu Gly	Thr Trp Leu Ser Asp	Pro Pro Gly Ala Gly Thr		
	210	215	220	
Tyr Pro Thr Leu Gln	Pro Phe Gln Tyr Leu Glu	Glu Val His Ile Ser		
225	230	235	240	
His Val Gly Gln Pro	Met Leu Asn Phe Ser	Phe Asn Ser Phe His Pro		
	245	250	255	
Asp Thr Arg Lys Pro	Met His Arg Glu Cys	Gly Phe Ile Arg Leu Lys		
	260	265	270	
Pro Asp Thr Asn Lys	Val Ala Phe Val Ser	Ala Gln Asn Thr Gly Val		
	275	280	285	
Val Glu Val Glu Glu	Gly Glu Val Asn Gly	Gln Glu Leu Cys Ile Ala		
	290	295	300	
Ser His Ser Ile Ala	Arg Ile Ser Phe Ala	Lys Glu Pro His Val Glu		
305	310	315	320	
Gln Ile Thr Arg Lys	Phe Arg Leu Asn Ser	Glu Gly Lys Leu Glu Gln		
	325	330	335	
Thr Val Ser Met Ala	Thr Thr Thr Gln	Pro Met Thr Gln His Leu His		
	340	345	350	
Val Thr Tyr Lys Lys	Val Thr Pro			
	355	360		

&lt;210&gt; 5559

&lt;211&gt; 3866

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5559

nnaattcgag gatccgggta ccatggcaca gagcgacaga gacatttatt gttatttgtt  
60

ttttggtggc aaaaagggaa aatggcgaac gactcccttg caaaaagtct ggtggacatc  
120

gacctctect ccctgcgga tctgctggg atttttgagc tgggtgaagt ggttggaat  
180

ggcacctatg gacaagtcta taagggtcga catgttaaaa cgggtcagtt ggcagccatc  
240

aaagttatgg atgtcactga ggatgaagag gaagaaatca aactggagat aaatatgcta  
300

aagaaatact ctcatcacag aacattgca acatattatg gtgctttcat caaaaagagc  
360

cctccaggac atgatgacca actctggctt gttatggagt tctgtggggc tgggtccatt  
420

acagaccttg tgaagaacac caaagggaa acactcaaag aagactggat cgcttacatc  
480

tccagagaaa tctgagggg actggcacat cttcacattc atcatgtgat tcaccgggat  
540



atcaagggcc agaatgtggt gctgactgag aatgcagagg tgaaacttgt tgactttggt  
600  
gtgagtgtc agctggacag gactgtgggg cgagagaaata cgttcatagg cactccctac  
660  
tggatggctc ctgaggtcat cgctgtgat gagaaccag atgccaccta tgattacaga  
720  
agtgatcttt ggtcttgtgg cattacagcc attgagatgg cagaagggtc tccccctc  
780  
tgtgacatgc atccaatgag agcactgttt ctcatccca gaaacctcc tccccggctc  
840  
aagtccaaga agtggtcgaa gaagttcatt gacttcattg acacatgtct catcaagact  
900  
tacatgcagc ggcccaccac ggagcagctt ttgaagtttc cttttataag ggatcagccc  
960  
acggagcggc aggtccgcat ccagcttaag gatcatatag atcgtaccag gaagaagcgg  
1020  
ggtgagaaa aggagacaga atatgagtac agcggcagcg aggaggaaga tgacagccat  
1080  
ggagaggaag gagagccaag ttccatcatg aacgtgcctg gagagtctac tcttcgccga  
1140  
gatttctga gactgcagca ggagaacaag gaacgttccg aggctcttcg gagacaacag  
1200  
ttactacagg agcaacagct cggggagcag gaagaatata aaaggcaact gctggcagag  
1260  
agacagaagc ggattgagca gcagaaagaa cagaggcgac ggctagaaga gcaacaaagg  
1320  
agagagcggg aggctagaag gcagcaggaa cgtgaacagc gaaggagaga acaagaagaa  
1380  
aagaggcgtc tagaggagtt ggagagaagg cgaaagaag aagaggagag gagacgggca  
1440  
gaagaagaaa agaggagagt tgaaagagaa caggagtata tcaggcgaca gctagaagag  
1500  
gagcagcggc acttgaagt ccttcagcag cagctgctcc aggagcaggc catgttactg  
1560  
catgaccata ggaggccgca cccgcagcac tcgcagcagc cgccaccacc gcagcaggaa  
1620  
aggagcaagc caagcttcca tgctcccgag cccaaagccc actacgagcc tgctgaccga  
1680  
gcgcgagagg ttctgtgag aacaacatct cgctcccctg ttctgtcccg tcgagattcc  
1740  
ccactgcagg gcagtgggca gcagaatagc caggcaggac agagaaactc caccagcagt  
1800  
attgagccca ggcttctgtg ggagagagtg gagaagctgg tgcccagacc tggcagtggc  
1860  
agctcctcag ggtccagcaa ctccagatcc cagcccggt ctccacctgg gtctcagagt  
1920  
ggctccgggg aacgttccag agtgagatca tcatccaagt ctgaaggctc tccatctcag  
1980  
cgcttgaaa atgcagtga aaaacctgaa gataaaaagg aagttttcag acccctcaag  
2040  
cctgctggcg aagtggatct gaccgcactg gccaaagagc ttcgagcagt ggaagatgta  
2100  
cggccacctc acaaagtaac ggactactcc tcatccagtg aggagtcggg gacgacggat  
2160

gaggaggacg acgatgtgga gcaggaaggg gctgacgagt ccacctcagg accagaggac  
2220  
accagagcag cgtcatctct gaatttgagc aatggtgaaa cggaatctgt gaaaaccatg  
2280  
attgtccatg atgatgtaga aagtgagccg gccatgaccc catccaagga gggcactcta  
2340  
atcgccgccc agactcagtc cgctagtagc aactccaga aacacaaatc ttctctctcc  
2400  
tttacacctt ttatagaccc cagattacta cagatttctc catctagcgg aacaacagt  
2460  
acatctgtgg tgggatttct ctgtgatggg atgagaccag aagccataag gcaagatcct  
2520  
acccggaaaag gctcagtggc caatgtgaat cctaccaaca ctaggccaca gagtgcaccc  
2580  
ccggagattc gtaaatacaa gaagaggttt aactctgaga ttctgtgtgc tgccttatgg  
2640  
ggagtgaatt tgctagtggg tacagagagt ggctgatgc tgctggacag aagtggccaa  
2700  
gggaaggtct atcctcttat caaccgaaga cgatttcaac aaatggacgt acttgagggc  
2760  
ttgaatgtct tgggtgacaat atctggcaaa aaggataagt tacgtgtcta ctatttgtcc  
2820  
tggttaagaa ataaaatact tcacaatgat ccagaagttg agaagaagca gggatggaca  
2880  
accgtagggg atttggaagg atgtgtacat tataaagttg taaaatatga aagaatcaaa  
2940  
tttctgggta ttgctttgaa gagttctgtg gaagtctatg cgtgggcacc aaagccatat  
3000  
caciaattta tggcctttaa gtcatttgga gaattggtac ataagccatt actggtggat  
3060  
ctcactgttg aggaaggcca gaggttgaaa gtgatctatg gatcctgtgc tggattccat  
3120  
gctgttgatg tggattcagg atcagtctat gacatttacc taccaacaca tgtaagaaag  
3180  
aaccacact ctatgatcca gtgtagcatc aaaccccatg caatcatcat cctccccaat  
3240  
acagatggaa tggagcttct ggtgtgctat gaagatgagg gggtttatgt aaacacatat  
3300  
ggaaggatca ccaaggatgt agttctacag tggggagaga tgcctacatc agtagcatat  
3360  
attcgatcca atcagacaat gggctgggga gagaaggcca tagagatccg atctgtggaa  
3420  
actggtcact tggatgggtg gttcatgcac aaaagggctc aaagactaaa attcttgtgt  
3480  
gaacgcaatg acaaggtgtt ctttgccctc gttcggctcgt gtggcagcag tcaggtttat  
3540  
ttcatgacct taggcaggac ttctctctct agctggtaga agcagtgtga tccagggatt  
3600  
actggcctcc agagtcttca agatcctgag aacttggaaat tcttgtaac tggagctcgg  
3660  
agctgcaccg agggcaacca ggacagctgt gtgtgcagac ctcagtgtgt gggttctctc  
3720  
ccctccttcc tgttctctct atataccagt ttatcccat tttttttttt tttcttactc  
3780

caaaataaat caaggctgca atgcagctgg tgctgttcag attccaaaaa aaaaaaaaaa  
 3840  
 ccattggtacc cggatcctcg aattcc  
 3866

<210> 5560

<211> 1165

<212> PRT

<213> Homo sapiens

<400> 5560

Met	Ala	Asn	Asp	Ser	Pro	Ala	Lys	Ser	Leu	Val	Asp	Ile	Asp	Leu	Ser
1				5					10					15	
Ser	Leu	Arg	Asp	Pro	Ala	Gly	Ile	Phe	Glu	Leu	Val	Glu	Val	Val	Gly
			20					25					30		
Asn	Gly	Thr	Tyr	Gly	Gln	Val	Tyr	Lys	Gly	Arg	His	Val	Lys	Thr	Gly
			35				40					45			
Gln	Leu	Ala	Ala	Ile	Lys	Val	Met	Asp	Val	Thr	Glu	Asp	Glu	Glu	Glu
	50					55					60				
Glu	Ile	Lys	Leu	Glu	Ile	Asn	Met	Leu	Lys	Lys	Tyr	Ser	His	His	Arg
65					70					75				80	
Asn	Ile	Ala	Thr	Tyr	Tyr	Gly	Ala	Phe	Ile	Lys	Lys	Ser	Pro	Pro	Gly
			85						90					95	
His	Asp	Asp	Gln	Leu	Trp	Leu	Val	Met	Glu	Phe	Cys	Gly	Ala	Gly	Ser
			100					105					110		
Ile	Thr	Asp	Leu	Val	Lys	Asn	Thr	Lys	Gly	Asn	Thr	Leu	Lys	Glu	Asp
	115					120						125			
Trp	Ile	Ala	Tyr	Ile	Ser	Arg	Glu	Ile	Leu	Arg	Gly	Leu	Ala	His	Leu
	130					135					140				
His	Ile	His	His	Val	Ile	His	Arg	Asp	Ile	Lys	Gly	Gln	Asn	Val	Leu
145					150					155				160	
Leu	Thr	Glu	Asn	Ala	Glu	Val	Lys	Leu	Val	Asp	Phe	Gly	Val	Ser	Ala
			165						170					175	
Gln	Leu	Asp	Arg	Thr	Val	Gly	Arg	Arg	Asn	Thr	Phe	Ile	Gly	Thr	Pro
			180				185					190			
Tyr	Trp	Met	Ala	Pro	Glu	Val	Ile	Ala	Cys	Asp	Glu	Asn	Pro	Asp	Ala
	195						200					205			
Thr	Tyr	Asp	Tyr	Arg	Ser	Asp	Leu	Trp	Ser	Cys	Gly	Ile	Thr	Ala	Ile
	210					215					220				
Glu	Met	Ala	Glu	Gly	Ala	Pro	Pro	Leu	Cys	Asp	Met	His	Pro	Met	Arg
225					230					235				240	
Ala	Leu	Phe	Leu	Ile	Pro	Arg	Asn	Pro	Pro	Pro	Arg	Leu	Lys	Ser	Lys
			245						250					255	
Lys	Trp	Ser	Lys	Lys	Phe	Ile	Asp	Phe	Ile	Asp	Thr	Cys	Leu	Ile	Lys
			260					265					270		
Thr	Tyr	Met	Gln	Arg	Pro	Thr	Thr	Glu	Gln	Leu	Leu	Lys	Phe	Pro	Phe
	275						280					285			
Ile	Arg	Asp	Gln	Pro	Thr	Glu	Arg	Gln	Val	Arg	Ile	Gln	Leu	Lys	Asp
	290					295					300				
His	Ile	Asp	Arg	Thr	Arg	Lys	Lys	Arg	Gly	Glu	Lys	Glu	Glu	Thr	Glu
305					310					315				320	
Tyr	Glu	Tyr	Ser	Gly	Ser	Glu	Glu	Glu	Asp	Asp	Ser	His	Gly	Glu	Glu
			325						330				335		
Gly	Glu	Pro	Ser	Ser	Ile	Met	Asn	Val	Pro	Gly	Glu	Ser	Thr	Leu	Arg

4744

770		775		780
Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser				
785		790		795
Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys				800
	805		810	815
Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp				
	820		825	830
Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu				
	835		840	845
Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly				
	850		855	860
Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile				
	865		870	875
Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val				880
	885		890	895
Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu				
	900		905	910
Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys				
	915		920	925
Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr				
	930		935	940
Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys				
	945		950	955
Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe				
	965		970	975
Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val				
	980		985	990
Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser				
	995		1000	1005
Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp				
	1010		1015	1020
Ile Tyr Leu Pro Thr His Val Arg Lys Asn Pro His Ser Met Ile Gln				
	1025		1030	1035
Cys Ser Ile Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly				
	1045		1050	1055
Met Glu Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr				
	1060		1065	1070
Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro				
	1075		1080	1085
Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu				
	1090		1095	1100
Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val				
	1105		1110	1115
Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn				
	1125		1130	1135
Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val				
	1140		1145	1150
Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp				
	1155		1160	1165

&lt;210&gt; 5561

&lt;211&gt; 2089

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5561

tctagagcag gtgcgcggct gcaccggcag ccgcgggaag ctccggccgg cagggtttcc  
60  
ccgcacgctg gcgccagct cccggcgcgg aggccgctgt aagtttcgct ttccattcag  
120  
tganaacga aagctgggcg gggtgccacg agcgcggggc cagaccaagg cggggccgga  
180  
gcggaacttc ggtcccagct cggccccggg ctccagtcgg acgtggaact cagcagcgga  
240  
ggctggagcg ttgcatggcg cttgagagat tccatcgtgc ctggctcaca taagcgcttc  
300  
ctggaagtga agtcgtgctg tcctgaacgc gggccaggca gctgcggcct gggggttttg  
360  
gagtgatcac gaatgagcaa ggcgtttggg ctccctgaggc aaatctgtca gtccatcctg  
420  
gctgagtcct cgcagtcgcc ggcagatctt gaagaaaaga aggaagaaga cagcaacatg  
480  
aagagagagc agcccagaga gcgtcccagg gcctgggact accctcatgg cctggttggt  
540  
ttacacaaca ttggacagac ctgctgcctt aactccttga ttccaggtgtt cgtaatgaat  
600  
gtggacttca ccaggatatt gaagaggatc acggtgccc aaggagctga cgagcagagg  
660  
agaagcgtec ttttcagat gcttctgctg ctggagaaga tgcaggacag ccggcagaaa  
720  
gcagtgcggc ccttgagct ggcctactgc ctgcagaagt gcaacgtgcc cttgtttgtc  
780  
caacatgatg ctgcccact gtacctcaa ctctggaacc tgattaagga ccagatcact  
840  
gatgtgcact tggaggagag actgcaggcc ctgtatacga tccgggtgaa ggactccttg  
900  
atttgcgttg actgtgccat ggagagtagc agaaacagca gcatgctcac cctcccactt  
960  
tctctttttg atgtggactc aaagcccctg aagacactgg aggacgcctt gcactgcttc  
1020  
ttccagccca gggagttatc aagcaaaagc aagtgttct gtgagaactg tgggaagaag  
1080  
accggtggga aacaggtctt gaagctgacc catttgcccc agaccctgac aatccacctc  
1140  
atgcgattct ccatcaggaa ttacacagcg agaaagatct gccactccct gtacttcccc  
1200  
cagagcttgg atttcagcca gatccttcca atgaagcgag agtcttgtga tgctgaggag  
1260  
cagtctggag ggcagtatga gctttttgct gtgattgcgc acgtgggaat ggcagactcc  
1320  
ggtcattact gtgtctacat ccggaatgct gtggatggaa aatgggttctg cttcaatgac  
1380  
tccaatattt gcttgggtgc ctgggaagac atccagtgt cctacggaaa tcctaactac  
1440  
cactggcagg aaactgcata tcttctgggt tacatgaaga tggagtgtca atggaaatgc  
1500  
ccaaaacctt cagagattga cacgtgtca ttttccattt ccgttccctg atctacggag  
1560

tcttctaaga gattttgcaa tgaggagaag cattgttttc aaactatata actgagcctt  
 1620  
 atttataatt agggatatta tcaaaatatg taaccatgag gccctcagg tcctgatcag  
 1680  
 tcagaatgga tgctttcacc agcagaccg gccatgtggc tgctcggtcc tgggtgctcg  
 1740  
 ctgctgtgcg agacattagc cctttagtta tgagcctgtg ggaacttcag ggggtcccag  
 1800  
 tggggagagc agtggcagtg ggaggcatct gggggccaaa ggtcagtggc aggggggtatt  
 1860  
 tcagtattat acaactgctg tgaccagact tgtatactgg ccgaatatca gtgctgtttg  
 1920  
 taatttttca ctttgagaac caacattaat tccatagtaa tcaagtgttt tgtaactgtt  
 1980  
 attcatttat tcagcaaata tttattgatc atctcttctc cataagatag tgtgataaac  
 2040  
 acagtcatga ataaagttat tttccacaaa aaaaaaaaaa aaaaaaaaaa  
 2089

&lt;210&gt; 5562

&lt;211&gt; 372

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5562

Met	Ser	Lys	Ala	Phe	Gly	Leu	Leu	Arg	Gln	Ile	Cys	Gln	Ser	Ile	Leu
1				5					10					15	
Ala	Glu	Ser	Ser	Gln	Ser	Pro	Ala	Asp	Leu	Glu	Glu	Lys	Lys	Glu	Glu
			20					25					30		
Asp	Ser	Asn	Met	Lys	Arg	Glu	Gln	Pro	Arg	Glu	Arg	Pro	Arg	Ala	Trp
		35					40					45			
Asp	Tyr	Pro	His	Gly	Leu	Val	Gly	Leu	His	Asn	Ile	Gly	Gln	Thr	Cys
	50				55					60					
Cys	Leu	Asn	Ser	Leu	Ile	Gln	Val	Phe	Val	Met	Asn	Val	Asp	Phe	Thr
65				70					75					80	
Arg	Ile	Leu	Lys	Arg	Ile	Thr	Val	Pro	Arg	Gly	Ala	Asp	Glu	Gln	Arg
			85					90					95		
Arg	Ser	Val	Pro	Phe	Gln	Met	Leu	Leu	Leu	Glu	Lys	Met	Gln	Asp	
			100					105					110		
Ser	Arg	Gln	Lys	Ala	Val	Arg	Pro	Leu	Glu	Leu	Ala	Tyr	Cys	Leu	Gln
		115					120					125			
Lys	Cys	Asn	Val	Pro	Leu	Phe	Val	Gln	His	Asp	Ala	Ala	Gln	Leu	Tyr
	130					135				140					
Leu	Lys	Leu	Trp	Asn	Leu	Ile	Lys	Asp	Gln	Ile	Thr	Asp	Val	His	Leu
145				150					155					160	
Val	Glu	Arg	Leu	Gln	Ala	Leu	Tyr	Thr	Ile	Arg	Val	Lys	Asp	Ser	Leu
			165					170					175		
Ile	Cys	Val	Asp	Cys	Ala	Met	Glu	Ser	Ser	Arg	Asn	Ser	Ser	Met	Leu
		180						185					190		
Thr	Leu	Pro	Leu	Ser	Leu	Phe	Asp	Val	Asp	Ser	Lys	Pro	Leu	Lys	Thr
		195					200					205			
Leu	Glu	Asp	Ala	Leu	His	Cys	Phe	Phe	Gln	Pro	Arg	Glu	Leu	Ser	Ser
	210					215					220				
Lys	Ser	Lys	Cys	Phe	Cys	Glu	Asn	Cys	Gly	Lys	Lys	Thr	Arg	Gly	Lys

225                      230                      235                      240  
 Gln Val Leu Lys Leu Thr His Leu Pro Gln Thr Leu Thr Ile His Leu  
                                  245                      250                      255  
 Met Arg Phe Ser Ile Arg Asn Ser Gln Thr Arg Lys Ile Cys His Ser  
                                  260                      265                      270  
 Leu Tyr Phe Pro Gln Ser Leu Asp Phe Ser Gln Ile Leu Pro Met Lys  
                                  275                      280                      285  
 Arg Glu Ser Cys Asp Ala Glu Glu Gln Ser Gly Gly Gln Tyr Glu Leu  
                                  290                      295                      300  
 Phe Ala Val Ile Ala His Val Gly Met Ala Asp Ser Gly His Tyr Cys  
 305                      310                      315                      320  
 Val Tyr Ile Arg Asn Ala Val Asp Gly Lys Trp Phe Cys Phe Asn Asp  
                                  325                      330                      335  
 Ser Asn Ile Cys Leu Val Ser Trp Glu Asp Ile Gln Cys Thr Tyr Gly  
                                  340                      345                      350  
 Asn Pro Asn Tyr His Trp Gln Glu Thr Ala Tyr Leu Leu Val Tyr Met  
                                  355                      360                      365  
 Lys Met Glu Cys  
                                  370

<210> 5563  
 <211> 2878  
 <212> DNA  
 <213> Homo sapiens

<400> 5563  
 nagtcaggca gcgaggagccg ccgggagcgg atggcgggcg ccgtagcggc tccactcgcc  
 60  
 gccgggggtg aggaggcggc agccacgacc tccgtgcccg ggtctccagg tctgcccggg  
 120  
 agacgcagtg cagagcgggc cctagaggag gccgtggcca ccgggaccct gaacctgtct  
 180  
 aaccggcgct tgaagcactt cccccggggc ggggcccgtg gctacgacct gtcagacatc  
 240  
 acccaggctg acctgtcccg gaaccgggtt cccgaggtgc ccgaggcggc gtgccagctg  
 300  
 gtgtcccttg agggcctgag cctctaccac aattgectga gatgcctgaa cccagccttg  
 360  
 gggaatctca cagccctcac ctacctcaac ctacgccgaa accagctgtc gctgctgcca  
 420  
 ccctacatct gccagctgcc cctgagggtc ctcatcgtca gcaacaacaa gctgggagcc  
 480  
 ctgccccctg acatcggcac cctgggaagc ctgcgacagc ttgacgtgag cagcaacgag  
 540  
 ctccaatccc tgccctcgga actgtgtggc ctctcttccc tgcgggacct caatgtccgg  
 600  
 aggaaccagc tcagtacgtc gccgaagag ctgggggacc tccctctggt ccgcctggat  
 660  
 ttctcctgta accgcgtctc ccgaatccca gtctccttct gccgcctgag gcacctgcag  
 720  
 gtcattctgc tggacagcaa ccctctgcag agtccacctg cccaggtctg cctgaagggg  
 780  
 aaacttcaca tcttcaagta tttgtccaca gaggccgggc agcgtgggtc ggccctgggg  
 840



gacctggccc cttctcgccc cccgagtttc agtccttgcc ctgcagagga tctatttccg  
900  
ggacatcggt acgatggtgg gctggactca ggcttccaca gcgttgatag tggcagcaag  
960  
aggtggtctg gaaatgagtc aacagatgaa ttttcagagc tgtcattccg gatctcagag  
1020  
ctggccccggg agccccgggg gccagagaa cgcaaggagg atggctcagc ggacggagac  
1080  
cctgtgcaga ttgacttcat cgacagccat gtccccgggg aggatgaaga gcgaggcact  
1140  
gtggaggagc agcgaccacc cgaattaagc cctggggcag gggacaggga gagggcacca  
1200  
agcagcaggc gggaggagcc ggcaggggag gagcggcgcc gcccgacac cttgcagctg  
1260  
tggcaggagc gggaacggcg gcagcagcag cagagcgggg cgtggggggc cccgaggaag  
1320  
gatagcctct tgaagccagg gctcagggtt gttgtgggag gggccgccc cgtgtccact  
1380  
caagccatgc acaacggctc gcctaagtc agtgccctcc aagcaggggg ctgcagcggg  
1440  
gcagggagcc ccgcccctgc ccctgcctcc caagagcccc tccccatagc tggaccagcg  
1500  
acagcacctg ctccacggcc acttggtctc attcagagac caaacagctt cctcttccgt  
1560  
tcctctcttc agagtggctc aggccttccc tcaccagact ctgtctctgag acctcgggg  
1620  
tacccccagg ttccagatga gaaggactta atgactcagc tgcgccaggt ccttgagtcc  
1680  
cggctgcagc ggcccctgcc tgaggacctg gccgaggctc tggccagtgg ggtcctcctg  
1740  
tgccagctgg ccaaccagct acggccgccc tccgtgccct tcatccatgt gccctcccct  
1800  
gctgtgccaa aactcagtgc cctcaaggct cggaagaatg tggagagttt tctagaagcc  
1860  
tgtcgaaaaa tgggggtgcc tgaggctgac ctgtgctcgc cctcggtatc cctccagggc  
1920  
actgcccggg ggctgaggac cgcgctggag gccgtgaagc ggggtggggg caaggcccta  
1980  
ccgcccctct ggccccctc tgggtctggg ggttcctcgc tcttctacgt ggtcctcatg  
2040  
ctgctgctct atgtcaccta cactcggtc ctgggttcc aggcccaaa atcggccctc  
2100  
cctcacccct tccccctct ctctatttat aaggctccctg ctccaccga cccacctgc  
2160  
ggtgccttca gcccaccca aagacactag tgcacccct tcacagacac tgacctcaga  
2220  
ggcccaactc tgggtgcccc agaccctggg ccccagcct ctggcctccc tccagtagcc  
2280  
ccacgagtc ccacctctca gtgctgacgg tgccttcctg tccccgccc cctgcccct  
2340  
gccctctgta ccccgtaggg ggtggcagga gctggagtct cccccttcc cctgtgccct  
2400  
ccccctccc ccccaacagc tgctatgggg gggctaaatt atctctatct ttagagagg  
2460

atctatattt gtaggggttc ggggcccagg ccgggtccct atctctgtgt ataaactgta  
 2520  
 cagaccgtgg ccgccctgcc tgtgtgtgtg tgtgtgctcg cgcgcgcgcg tctgtccgtg  
 2580  
 gtgttggtgg ctgtggccat ggctctgtgc ccaccagcat ctccctcctg agatgccggc  
 2640  
 ctctcatgct cccggagcgt ccgcccaaccc ccctgttcac ctcccttctg ttatcgtga  
 2700  
 cagcttttctt gcgtctcatt tgtcgccgag ccccgagcgc acggtgatgc tgggtctgc  
 2760  
 ccccgacccc ctgccacagg ccggaagccg cagggggcac cgtggggaag ctaaccggc  
 2820  
 cccttcccc aggagtcact gtgccagccc caccacatcc tggaagagga ggaggcct  
 2878

<210> 5564

<211> 683

<212> PRT

<213> Homo sapiens

<400> 5564

Met	Ala	Ala	Ala	Val	Ala	Ala	Pro	Leu	Ala	Ala	Gly	Gly	Glu	Glu	Ala
1				5					10					15	
Ala	Ala	Thr	Thr	Ser	Val	Pro	Gly	Ser	Pro	Gly	Leu	Pro	Gly	Arg	Arg
		20						25					30		
Ser	Ala	Glu	Arg	Ala	Leu	Glu	Glu	Ala	Val	Ala	Thr	Gly	Thr	Leu	Asn
		35					40					45			
Leu	Ser	Asn	Arg	Arg	Leu	Lys	His	Phe	Pro	Arg	Gly	Ala	Ala	Arg	Ser
		50				55					60				
Tyr	Asp	Leu	Ser	Asp	Ile	Thr	Gln	Ala	Asp	Leu	Ser	Arg	Asn	Arg	Phe
65					70					75				80	
Pro	Glu	Val	Pro	Glu	Ala	Ala	Cys	Gln	Leu	Val	Ser	Leu	Glu	Gly	Leu
				85					90					95	
Ser	Leu	Tyr	His	Asn	Cys	Leu	Arg	Cys	Leu	Asn	Pro	Ala	Leu	Gly	Asn
			100					105					110		
Leu	Thr	Ala	Leu	Thr	Tyr	Leu	Asn	Leu	Ser	Arg	Asn	Gln	Leu	Ser	Leu
		115					120					125			
Leu	Pro	Pro	Tyr	Ile	Cys	Gln	Leu	Pro	Leu	Arg	Val	Leu	Ile	Val	Ser
		130				135					140				
Asn	Asn	Lys	Leu	Gly	Ala	Leu	Pro	Pro	Asp	Ile	Gly	Thr	Leu	Gly	Ser
145				150					155					160	
Leu	Arg	Gln	Leu	Asp	Val	Ser	Ser	Asn	Glu	Leu	Gln	Ser	Leu	Pro	Ser
			165						170					175	
Glu	Leu	Cys	Gly	Leu	Ser	Ser	Leu	Arg	Asp	Leu	Asn	Val	Arg	Arg	Asn
		180						185					190		
Gln	Leu	Ser	Thr	Leu	Pro	Glu	Glu	Leu	Gly	Asp	Leu	Pro	Leu	Val	Arg
		195					200					205			
Leu	Asp	Phe	Ser	Cys	Asn	Arg	Val	Ser	Arg	Ile	Pro	Val	Ser	Phe	Cys
	210					215					220				
Arg	Leu	Arg	His	Leu	Gln	Val	Ile	Leu	Leu	Asp	Ser	Asn	Pro	Leu	Gln
225					230					235				240	
Ser	Pro	Pro	Ala	Gln	Val	Cys	Leu	Lys	Gly	Lys	Leu	His	Ile	Phe	Lys
			245						250					255	
Tyr	Leu	Ser	Thr	Glu	Ala	Gly	Gln	Arg	Gly	Ser	Ala	Leu	Gly	Asp	Leu

260	265	270
Ala Pro Ser Arg Pro Pro Ser Phe Ser Pro Cys Pro Ala Glu Asp Leu		
275	280	285
Phe Pro Gly His Arg Tyr Asp Gly Gly Leu Asp Ser Gly Phe His Ser		
290	295	300
Val Asp Ser Gly Ser Lys Arg Trp Ser Gly Asn Glu Ser Thr Asp Glu		
305	310	315
Phe Ser Glu Leu Ser Phe Arg Ile Ser Glu Leu Ala Arg Glu Pro Arg		
325	330	335
Gly Pro Arg Glu Arg Lys Glu Asp Gly Ser Ala Asp Gly Asp Pro Val		
340	345	350
Gln Ile Asp Phe Ile Asp Ser His Val Pro Gly Glu Asp Glu Glu Arg		
355	360	365
Gly Thr Val Glu Glu Gln Arg Pro Pro Glu Leu Ser Pro Gly Ala Gly		
370	375	380
Asp Arg Glu Arg Ala Pro Ser Ser Arg Arg Glu Glu Pro Ala Gly Glu		
385	390	395
Glu Arg Arg Arg Pro Asp Thr Leu Gln Leu Trp Gln Glu Arg Glu Arg		
405	410	415
Arg Gln Gln Gln Gln Ser Gly Ala Trp Gly Ala Pro Arg Lys Asp Ser		
420	425	430
Leu Leu Lys Pro Gly Leu Arg Ala Val Val Gly Gly Ala Ala Val		
435	440	445
Ser Thr Gln Ala Met His Asn Gly Ser Pro Lys Ser Ser Ala Ser Gln		
450	455	460
Ala Gly Gly Cys Ser Gly Ala Gly Ser Pro Ala Pro Ala Pro Ala Ser		
465	470	475
Gln Glu Pro Leu Pro Ile Ala Gly Pro Ala Thr Ala Pro Ala Pro Arg		
485	490	495
Pro Leu Gly Ser Ile Gln Arg Pro Asn Ser Phe Leu Phe Arg Ser Ser		
500	505	510
Ser Gln Ser Gly Ser Gly Pro Ser Ser Pro Asp Ser Val Leu Arg Pro		
515	520	525
Arg Arg Tyr Pro Gln Val Pro Asp Glu Lys Asp Leu Met Thr Gln Leu		
530	535	540
Arg Gln Val Leu Glu Ser Arg Leu Gln Arg Pro Leu Pro Glu Asp Leu		
545	550	555
Ala Glu Ala Leu Ala Ser Gly Val Ile Leu Cys Gln Leu Ala Asn Gln		
565	570	575
Leu Arg Pro Arg Ser Val Pro Phe Ile His Val Pro Ser Pro Ala Val		
580	585	590
Pro Lys Leu Ser Ala Leu Lys Ala Arg Lys Asn Val Glu Ser Phe Leu		
595	600	605
Glu Ala Cys Arg Lys Met Gly Val Pro Glu Ala Asp Leu Cys Ser Pro		
610	615	620
Ser Asp Leu Leu Gln Gly Thr Ala Arg Gly Leu Arg Thr Ala Leu Glu		
625	630	635
Ala Val Lys Arg Val Gly Gly Lys Ala Leu Pro Pro Leu Trp Pro Pro		
645	650	655
Ser Gly Leu Gly Gly Phe Val Val Phe Tyr Val Val Leu Met Leu Leu		
660	665	670
Leu Tyr Val Thr Tyr Thr Arg Leu Leu Gly Ser		
675	680	

&lt;210&gt; 5565

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5565

nggatccaaa cgccgtggcc gggggccgc gcccgggcag acccgggctc cgctctcacg  
 60  
 tcacgcggta catgggctac agttccttgt ccgagggctt ccgggagctg gagccgcaca  
 120  
 gaatgaaggg gctcactggg agtggttccc aacttcgttg catattaaac ccccgaggaga  
 180  
 acttaaactc cagtgccag tcctatgcaa tcagatcctg ggtctccact gtgcagcgcc  
 240  
 cgtggagagc cagcgatgtg gagggctgag atcaccagc tctttgggga cagggtctca  
 300  
 ctgcccccaa ggctggagtc cgggtgtgca atcacggctc acagcagtct cgacctccag  
 360  
 ggctcaagcg atcctccagc ctcagcctcc cgagcagctg ggagcacagg cgcataccac  
 420  
 gcgtggcttt tttagagcga gggcttgcca tgtttccag gctgggtctcg aa  
 472

&lt;210&gt; 5566

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5566

Met	Gln	Ser	Asp	Pro	Gly	Ser	Pro	Leu	Cys	Ser	Ala	Arg	Gly	Glu	Pro
1					5				10					15	
Ala	Met	Trp	Arg	Val	Glu	Ile	Thr	Gln	Phe	Phe	Gly	Asp	Arg	Val	Ser
			20					25					30		
Leu	Pro	Pro	Arg	Leu	Glu	Ser	Gly	Gly	Ala	Ile	Thr	Ala	His	Ser	Ser
			35				40					45			
Leu	Asp	Leu	Gln	Gly	Ser	Ser	Asp	Pro	Pro	Ala	Ser	Ala	Ser	Arg	Ala
	50					55					60				
Ala	Gly	Ser	Thr	Gly	Ala	Tyr	His	Ala	Trp	Leu	Phe				
65					70					75					

&lt;210&gt; 5567

&lt;211&gt; 968

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5567

tttttttttt tttttttttt taggttccaa taaaatttta tttatgaaca ctaaaatttg  
 60  
 aatttcatat gctttttctc tgccacaaaa tattattctt ttgattgtat tcaacctttt  
 120  
 taaaaacat ttttagctca caagctgtac aaaaacagac ggtgagtaaa ttggcccaca  
 180  
 gaccggtttg ctageccctg ggcttaagag atctgtccac ttactctca acatgcagag  
 240

tgtgaactgt gtgaactgca taggccacag caatcttact gcatccattc cgctgcac  
 300  
 attatttttg atttgatttc attcagtcga ccgaagcatt cacttggcac ctctccaaat  
 360  
 ctgggtactg tgcaagatcc ttcttgga cactgaagga aaatcagaca cgcccttct  
 420  
 ctcaagttcg cagactctcc ggtatccaga tactacggct ctcatagtat cagaaaacac  
 480  
 agccacaagc gcaggtaagt atcagaggtg ttttacgaga tacatgtatc agattcttaa  
 540  
 ggctgctgta ccaaaatacc acaaactgca tggcttaaaa caacagaaat ttattccctc  
 600  
 acaatcctgg aggccagatg tctgaaatca agatattggt agggttggtt ccttctcgag  
 660  
 actctgaggg agaactctgt acatgcctgt tttctagct tctagtact tctccaatt  
 720  
 cttagggttc tttggctcat agatgcattg ctctaattc tgcctccatc tcccatggc  
 780  
 cttcagctct gtgtgtctat ttcccttct tttctaagag ctagtcattg aatttagggc  
 840  
 ccaccctact acaggttgat ctcatctcca ggtccttgat ttcactgca aaaacttttt  
 900  
 ccaataatg tcacacgtgg agattcccag tgaatgtatc tctgggggc cactattcag  
 960  
 cctattac  
 968

&lt;210&gt; 5568

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5568

Met Gln Ser Val Asn Cys Val Asn Cys Ile Gly His Ser Asn Leu Thr  
 1 5 10 15  
 Ala Ser Ile Pro Ala Ala Ser Leu Phe Leu Ile Cys Ile His Ser Val  
 20 25 30  
 His Arg Ser Ile His Leu Ala Pro Leu Gln Ile Trp Val Leu Cys Lys  
 35 40 45  
 Ile Leu Pro Trp Asp Thr Glu Gly Lys Ser Asp Thr Ala Leu Leu Ser  
 50 55 60  
 Ser Ser Gln Thr Leu Arg Tyr Pro Asp Thr Thr Ala Leu Ile Val Ser  
 65 70 75 80  
 Glu Asn Thr Ala Thr Ser Ala Gly Lys Tyr Gln Arg Cys Phe Thr Arg  
 85 90 95  
 Tyr Met Tyr Gln Ile Leu Lys Ala Ala Val Pro Lys Tyr His Lys Leu  
 100 105 110  
 His Gly Leu Lys Gln Gln Lys Phe Ile Pro Ser Gln Ser Trp Arg Pro  
 115 120 125  
 Asp Val  
 130

&lt;210&gt; 5569

&lt;211&gt; 876

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5569

```

nntttttttt tttttttttt ttgttaacct agagaaaaaa attttattta aagacacatt
60
ttaagtaaaa tgaagaacat ttacttatt tttatgtcca gtacagtcaa agcagccaca
120
ttgcataacc cggggggacc ccttcctctt ttgtgatgcc ccagaacaat attgatttga
180
ttatagaaaag ccaccggcag cctacatgcg caacggtgag ttgttggtta tatacactgt
240
ggaccataca gtggaatatt acagtcaata aaaggtatth tttagagagaa aaaaaaacat
300
tggaacacgc ttatgatata atgttaggca aaatcgctgt tatgaacagc tcgtttgggg
360
cagagcaaat cctgggaagt aacgctgagg ctgttggtgc aggcggtgga gtacaacatc
420
ttcgagggta tggagtgtcca cggctcccca ctagtgttca tcagccaggg caagatcgtc
480
tttgaagacg gaaacatcaa cgtcaacaag ggcattgggc gcttcattcc gcggaaggcg
540
ttcccgagc acagttccac gtggctggaa cttcacaatc atggcagaag gcacgtctgc
600
gaggcatcct ggggctgcac tgctgaccc cttctctctc ccctggccct gactgctgcc
660
ttcatgtggc tcagcccttc cgtccttcaa gccttcacga gcttcagggc agccccgagt
720
ctgtgcccag gtacactggc taaaatgcag tgtcttccaa atagccatat ctcttttaac
780
cagggagcaa ttccagcatg gaagtcccca tcatgctcct gctggcaggt acaggtgtcca
840
gtttgtgacg gatgaaagca ccgacagccc acgcgt
876

```

&lt;210&gt; 5570

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5570

```

Thr Ala Arg Leu Gly Gln Ser Lys Ser Trp Glu Val Thr Leu Arg Leu
1      5      10      15
Leu Val Gln Ala Val Glu Tyr Asn Ile Phe Glu Gly Met Glu Cys His
20     25     30
Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val Phe Glu Asp
35     40     45
Gly Asn Ile Asn Val Asn Lys Gly Met Gly Arg Phe Ile Pro Arg Lys
50     55     60
Ala Phe Pro Glu His Ser Ser Thr Trp Leu Glu Leu His Asn His Gly
65     70     75     80
Arg Arg His Val Cys Glu Ala Ser Trp Gly Cys Thr Ala Asp Pro Leu
85     90     95
Leu Ser Pro Leu Ala Leu Ser Ala Ala Phe Met Trp Leu Ser Pro Ser

```

100	105	110
Val Leu Gln Ala Phe Ile Ser Phe Arg Ala Ala Pro Ser Leu Cys Pro		
115	120	125
Gly Thr Leu Ala Lys Met Gln Cys Leu Pro Asn Ser His Ile Ser Phe		
130	135	140
Asn Gln Gly Ala Ile Pro Ala Trp Lys Ser Pro Ser Cys Ser Cys Trp		
145	150	155
Gln Val Gln Val Pro Val Cys Asp Gly		160
165		

&lt;210&gt; 5571

&lt;211&gt; 405

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5571

```

aaccagaaag tggatctctt cagcctggga attatcttct ttgagatgtc ctatcacccc
60
atgggtcacgg cttcagaaag gatctttgtt ctcaaccaac tcagagatcc cacttcgcct
120
aagtttccag aagactttga cgatggagag catgcaaagc agaaatcagt catctcttgg
180
ctgttgaacc acgatccagc aaaacggccc acagccacag aactgctcaa gagtgagctg
240
ctgccccac cccagatgga ggagtcagag ctgcatgaag tgctgcacca cacgctgacc
300
aacgtggatg ggaaggccta ccgcaccatg atggcccaga tcttctcgca gcgcctcgct
360
ggggcggggg gaggtggcta ccgtcccggt cttggcgctc cgcgg
405

```

&lt;210&gt; 5572

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5572

Asn Gln Lys Val Asp Leu Phe Ser Leu Gly Ile Ile Phe Phe Glu Met		
1	5	10
Ser Tyr His Pro Met Val Thr Ala Ser Glu Arg Ile Phe Val Leu Asn		
20	25	30
Gln Leu Arg Asp Pro Thr Ser Pro Lys Phe Pro Glu Asp Phe Asp Asp		
35	40	45
Gly Glu His Ala Lys Gln Lys Ser Val Ile Ser Trp Leu Leu Asn His		
50	55	60
Asp Pro Ala Lys Arg Pro Thr Ala Thr Glu Leu Leu Lys Ser Glu Leu		
65	70	75
Leu Pro Pro Pro Gln Met Glu Glu Ser Glu Leu His Glu Val Leu His		
85	90	95
His Thr Leu Thr Asn Val Asp Gly Lys Ala Tyr Arg Thr Met Met Ala		
100	105	110
Gln Ile Phe Ser Gln Arg Leu Ala Gly Ala Gly Gly Gly Tyr Arg		
115	120	125
Ser Arg Leu Gly Val Pro Arg		

130

135

&lt;210&gt; 5573

&lt;211&gt; 1279

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5573

naaaaacagg tggaatccgg gctggagccg gagctccggc ggcgcgggtg gcggcacgtc  
60  
cctccagaca gtaccacagg cacctggagt accggcatcg gtcgctgtgg cccccgagt  
120  
tccgtcagag cctaggggag cctgcctcc cgcgctcgt cggggcccgg ccaggcacct  
180  
tggccgccgg cgacaggac cgggcacgag cactagatca cggctgctgg acctcggcac  
240  
gttgacaaga tttctctggg gtaccgcgga ggattacttt gaatttcggt ggtcgcctgt  
300  
ggtctggcat atttagaact taagtctatt atttcgggca ccatgacttt gaggccttta  
360  
gaagactggt gcagggggat ggacatgaac cctcggaag cgctattgat tgccggcatc  
420  
tcccagagct gcagtgtggc agaaatcgag gaggctctgc aggctggttt agtcccttg  
480  
ggggagtaca gactgcttg aaggatgttc aggagggatg agaacaggaa agtagcctta  
540  
gtagggctta ctgcggagac tagtcacgcc ctggtcccta aggagatacc gggaaaagg  
600  
ggtatctgga gagtgatctt taagccccct gaccagata atacattttt aagcagatta  
660  
aatgaatttt tagcgggaga gggcatgaca gtgggtgagt tgagcagagc tcttgacat  
720  
gaaaatggct ccttagaccc agagcagggc atgatcccgg aaatgtgggc ccctatgttg  
780  
gcacaggcat tagaggctct tcagcctgcc ctgcaatgct tgaagtataa aaagctgaga  
840  
gtgttctcgg gcaggagtc tccagaacca ggagaagaag aatttgacg ctggatgttt  
900  
catactactc agatgataaa ggcgtggcag gtgccagatg tagagaagag aaggcgattg  
960  
ctagagagcc ttcgaggccc agcacttgat gttattcgtg tctcaagat aaacaatcct  
1020  
ttaattactg tcgatgaatg tctgcaggct cttgaggagg tatttgggtg tacagataat  
1080  
cctagggagt tgcaggtaa atatctaacc acttaccaga aggatgagga aaagtgtcg  
1140  
gcttatgtac taaggctgga gcctttgtta cagaagctgg tacagagagg agcaattgag  
1200  
agagatgctg tgaatcaggc ccgcctagac caagtcattg ctggggcagt ccacaaaaca  
1260  
attcgcagag agcttaata  
1279

&lt;210&gt; 5574



&lt;211&gt; 312

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5574

```

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn
 1           5           10           15
Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val
      20           25           30
Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu
      35           40           45
Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val
      50           55           60
Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys
      65           70           75           80
Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro
      85           90           95
Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly
      100          105          110
Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn
      115          120          125
Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro
      130          135          140
Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu
      145          150          155          160
Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro
      165          170          175
Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile
      180          185          190
Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu
      195          200          205
Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn
      210          215          220
Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val
      225          230          235          240
Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr
      245          250          255
Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu
      260          265          270
Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp
      275          280          285
Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His
      290          295          300
Lys Thr Ile Arg Arg Glu Leu Asn
305          310

```

&lt;210&gt; 5575

&lt;211&gt; 2405

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5575

```

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
60

```

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct  
120  
ttagcatata cagtagagtt tctaattgtt tcagcattcc ctagtgggcg gttacaagtt  
180  
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg  
240  
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga  
300  
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcatcc  
360  
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgtaaccgg caatgagggc  
420  
cgctgtctg tggaaaacat caagcagctg ttgcaatgtt tagtcccagg aagcaccact  
480  
ctgcacagtg ctgagatttt ggctgaaatc gcccgatcc ttcggcctgg tggatgtctt  
540  
tttctgaagg agccagtaga gacagctgta gataacaata gcaaagtga gacagcatct  
600  
aagctgtgtt cagccctgac tctttctggt cttgtggaag tgaaagagct gcagcgggag  
660  
ccctaaccct ctgaggaagt acagtctgtt cgagaacacc ttggtcatga aagtgacaac  
720  
ctgctgtttg ttcagatcac aggcaaaaaa ccaaactttg aagtgggttc ttctaggcag  
780  
cttaagcttt ccatcaccaa gaagtcttct ccttcagtga aacctgctgt ggacctgct  
840  
gctgccaagc tgtggaccct ctccagcaac gatatggagg acgacagcat gtgcatcttc  
900  
tgtggatgta gtttaactca ccgttggcct cttgagcatg tggtcagggt gaacatgatg  
960  
atcaaccaa aggaggacag ggtggacacc ttctttaccc tggactcaa gtttcctctc  
1020  
gaagcctgca gtcactttag cttttcatta gcagagacca cgactgtatc actcattgct  
1080  
ttgaacactc tccaggatct cattgactca gatgagctgc tggatccaga agatttgaag  
1140  
aagccagatc cagcttcctt gcgggctgct tcttgtggg aagggaaaaa gaggaaggcc  
1200  
tgtaagaact gcacctgtgg ccttgctgaa gaactggaaa aagagaagtc aagggaaacag  
1260  
atgagctccc aaccaagtc agcttgtgga aactgctacc tgggcgatgc cttccgctgt  
1320  
gccagctgcc cctaccttg gatgccagcc ttcaaacctg gggaaaaggt gcttctgagt  
1380  
gatagcaatc ttcattgatc ctaggagggt cctgacatgg gacctatctg ctctccagc  
1440  
caactcctgt cctcacatc ccacctgggt ggctcctccc acctcctctg gatttgttca  
1500  
ctctgagatc tgtttgcaga gtgggtgctt agcagacaga gtgaagctgg ctggggggca  
1560  
cagtgggtg tagtctgct gtgtatcaaa agaccaaggt attatgggac ctggtttcag  
1620  
aatgggatgg gtttcttcac ctcatgttaa gagaaggag tgtgtcctga agaagccctt  
1680

cttctgatgt taaaatgctg accagaacgc tcttgagccc aggcacgtt gagcattaac  
 1740  
 actctgtgac agagctgcag acccctgcct tgagtctcat ctcagcaatg ctgccaccct  
 1800  
 cttgtctttc agagttgtta gtttactcca ttctttgtga cacgagtcaa gtggctcaca  
 1860  
 acctcctcag ggcaccagag gactcactca ctggttgctg tgatgatata cagtgtccct  
 1920  
 ctgccccctt ccattcccaa ccacatttga ctgtagcatt gcattctgtg cctgttgtca  
 1980  
 tttatgttaa ccttcaggta ttaaacttgc tgcatactct gacatatctt gagattctgc  
 2040  
 atgtcttgta aagagagggg atgtgcattt gtgtgtgatg ttggatagtc atccacgctc  
 2100  
 agtttggacc attggaggaa cttagtgtca cgcacaaatg gggctattcc tacgcttaga  
 2160  
 atagggcttg tctgccact ttagaagagt ccaggttggt gacatttag agggaagcag  
 2220  
 ggcagaactc tgaacgacaa tacgtctctc tgagcagaga cccctttgtt cttgttatcc  
 2280  
 acccatatgg acttgggaatc aatcttgcca aatatttga gagattgtgt ggatttaaga  
 2340  
 gacctggatt tttatatttt accagtaaataaaaagtctt attgatatct gtccttgaaa  
 2400  
 cttga  
 2405

<210> 5576

<211> 367

<212> PRT

<213> Homo sapiens

<400> 5576

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1			5					10					15		
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25				30			
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35				40					45				
Gln	Leu	Leu	Gln	Cys	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala
	50				55						60				
Glu	Ile	Leu	Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu
65				70				75						80	
Phe	Leu	Lys	Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val
			85					90					95		
Lys	Thr	Ala	Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val
		100						105				110			
Glu	Val	Lys	Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln
		115				120						125			
Ser	Val	Arg	Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val
	130				135						140				
Gln	Ile	Thr	Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln
145					150				155					160	
Leu	Lys	Leu	Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala

```
<210> 5577
<211> 659
<212> DNA
<213> Homo sapiens
```

```

<400> 5577
ctccacgcag ataagctgtg gttctgctgc ctgtcccca accacaagct gctgcagtac
60
ggagacatgg aggagggcng ccagcccgcc tacccctnng agagtctgcc cgagcaactc
120
cctgtggccg acatgagggc actcctgaca ggcaaggact gcccccatgt ccggggagaag
180
ggctccggga agcagaacaa ggacctctat gagttagcct tctcaatcag ctatgaccgt
240
ggggaggagg aagcgtacct caacttcatt gccccctcca agcggggagtt ctacctgtgg
300
acagatgggc tcagtgcctt gctgggcagt cccatgggca gcgagcagac acggtctggac
360
ctggagcagc tgctgaccat ggagaccaag ctgcgtctgc tggagctgga gaacgtgccc
420
atccccgagc ggccaccccc tgtgccccca cccccacca acttcaactt ctgctatgac
480
tgcagcatcg ctgaaccttg acagtgtggc tggccatggg ccacagctgc ggccactgca
540
gcagccatga agggcagtgg gtagaggagt gcaggcacc ctgaccagcag agattgctgc
600
aagaaataaag tctgcttggc tcttgggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
659

```

<210> 5578  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 5578  
 Leu His Ala Asp Lys Leu Trp Phe Cys Cys Leu Ser Pro Asn His Lys  
 1 5 10 15  
 Leu Leu Gln Tyr Gly Asp Met Glu Glu Gly Xaa Gln Pro Ala Tyr Pro  
 20 25 30  
 Xaa Glu Ser Leu Pro Glu Gln Leu Pro Val Ala Asp Met Arg Ala Leu  
 35 40 45  
 Leu Thr Gly Lys Asp Cys Pro His Val Arg Glu Lys Gly Ser Gly Lys  
 50 55 60  
 Gln Asn Lys Asp Leu Tyr Glu Leu Ala Phe Ser Ile Ser Tyr Asp Arg  
 65 70 75 80  
 Gly Glu Glu Glu Ala Tyr Leu Asn Phe Ile Ala Pro Ser Lys Arg Glu  
 85 90 95  
 Phe Tyr Leu Trp Thr Asp Gly Leu Ser Ala Leu Leu Gly Ser Pro Met  
 100 105 110  
 Gly Ser Glu Gln Thr Arg Leu Asp Leu Glu Gln Leu Leu Thr Met Glu  
 115 120 125  
 Thr Lys Leu Arg Leu Leu Glu Leu Glu Asn Val Pro Ile Pro Glu Arg  
 130 135 140  
 Pro Pro Pro Val Pro Pro Pro Pro Thr Asn Phe Asn Phe Cys Tyr Asp  
 145 150 155 160  
 Cys Ser Ile Ala Glu Pro  
 165

<210> 5579  
 <211> 1312  
 <212> DNA  
 <213> Homo sapiens

<400> 5579  
 actcctgtat caaccatgag ttcttctcag cctgtgtcac gaccattgca acccatacaa  
 60  
 ccagcaccgc ctcttcaacc atctgggggtg ccaacaagtg gaccatctca gaccaccata  
 120  
 cacttactac ctacagctcc aactaccgtg aatgtaacac atcgtccagt aactcagggtg  
 180  
 accacaagac tcctgttacc aagagctcct gcaaaccacc aggtggttta tacaactctt  
 240  
 cctgcaccac cagctcaggc tcccttgcca ggaactgtta tgcaggctcc tgctgttcgg  
 300  
 caggtcaatc cccaaaatag tggttacagtt cgagtgcctc aaacaaccac atatgttgta  
 360  
 aacaatggac taaccctggg atcaacagga cctcagctca cagtgcaccca ccgaccacca  
 420  
 caagtgcata ctgagccccc acgcccctgt caccagcac ccttaccaga agctccacaa  
 480  
 ccacagcgtc tgccccaga agctgccagc acatctctgc ctgagaagcc acacttgaag  
 540

ttagcacgcg ttcagagtca aaatggcata gtactgtcat ggagtgtcct ggaggtggat  
 600  
 cgaagctgtg ccactgttga tagctacat ctctatgctt accatgagga acccagtgcc  
 660  
 actgtgccct cacaatggaa aaagattggg gaagtcaagg cacttccctt gcccatggca  
 720  
 tgtactctca cccagtttgt atctggtagc aaatactact ttgcagtacg agccaaggat  
 780  
 atttatggac gttttgggccc tttctgtgat cctcagtcaa cagatgtgat ctcttctacc  
 840  
 cagagcagtt aaaccttgga gcctttatat tttctctttt taaaatttcc accttttgg  
 900  
 cttgttttta atcttgtgca tgatacccca tgtaaaatcc accttgtgca agatttcttg  
 960  
 gacagatgtg tgtatacact acatttgttt ataaccagaa gcaaaataaa ctcagccac  
 1020  
 aaagctagaa tcttttcttg gacagtttag gctttggggt ttggaaatgt aaatgtgtac  
 1080  
 cttgcttttag ttttgaggct ggggaatatg tgtgggtgtt tatgtgtgtt tttcttatg  
 1140  
 taggtgttat tgcattggag tctcccat tcttctcaa atttacctct taaagtacga  
 1200  
 agtaagtaga tcaaaggatt tgagatgtgt aactggcatg attctgcttt tgaaggatct  
 1260  
 atagtatcat tttagttaag tgggtcaaac agaatacaaa caaaacccaa ag  
 1312

&lt;210&gt; 5580

&lt;211&gt; 283

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5580

Thr	Pro	Val	Ser	Thr	Met	Ser	Ser	Ser	Gln	Pro	Val	Ser	Arg	Pro	Leu
1				5					10					15	
Gln	Pro	Ile	Gln	Pro	Ala	Pro	Pro	Leu	Gln	Pro	Ser	Gly	Val	Pro	Thr
		20						25					30		
Ser	Gly	Pro	Ser	Gln	Thr	Thr	Ile	His	Leu	Leu	Pro	Thr	Ala	Pro	Thr
		35					40					45			
Thr	Val	Asn	Val	Thr	His	Arg	Pro	Val	Thr	Gln	Val	Thr	Thr	Arg	Leu
	50					55					60				
Pro	Val	Pro	Arg	Ala	Pro	Ala	Asn	His	Gln	Val	Val	Tyr	Thr	Thr	Leu
65					70					75					80
Pro	Ala	Pro	Pro	Ala	Gln	Ala	Pro	Leu	Arg	Gly	Thr	Val	Met	Gln	Ala
				85					90					95	
Pro	Ala	Val	Arg	Gln	Val	Asn	Pro	Gln	Asn	Ser	Val	Thr	Val	Arg	Val
			100					105					110		
Pro	Gln	Thr	Thr	Thr	Tyr	Val	Val	Asn	Asn	Gly	Leu	Thr	Leu	Gly	Ser
		115					120					125			
Thr	Gly	Pro	Gln	Leu	Thr	Val	His	His	Arg	Pro	Pro	Gln	Val	His	Thr
	130					135					140				
Glu	Pro	Pro	Arg	Pro	Val	His	Pro	Ala	Pro	Leu	Pro	Glu	Ala	Pro	Gln
145					150					155					160
Pro	Gln	Arg	Leu	Pro	Pro	Glu	Ala	Ala	Ser	Thr	Ser	Leu	Pro	Gln	Lys

	165		170		175										
Pro	His	Leu	Lys	Leu	Ala	Arg	Val	Gln	Ser	Gln	Asn	Gly	Ile	Val	Leu
	180		185		190										
Ser	Trp	Ser	Val	Leu	Glu	Val	Asp	Arg	Ser	Cys	Ala	Thr	Val	Asp	Ser
	195		200		205										
Tyr	His	Leu	Tyr	Ala	Tyr	His	Glu	Glu	Pro	Ser	Ala	Thr	Val	Pro	Ser
	210		215		220										
Gln	Trp	Lys	Lys	Ile	Gly	Glu	Val	Lys	Ala	Leu	Pro	Leu	Pro	Met	Ala
	225		230		235										
Cys	Thr	Leu	Thr	Gln	Phe	Val	Ser	Gly	Ser	Lys	Tyr	Tyr	Phe	Ala	Val
	245		250		255										
Arg	Ala	Lys	Asp	Ile	Tyr	Gly	Arg	Phe	Gly	Pro	Phe	Cys	Asp	Pro	Gln
	260		265		270										
Ser	Thr	Asp	Val	Ile	Ser	Ser	Thr	Gln	Ser	Ser					
	275		280												

&lt;210&gt; 5581

&lt;211&gt; 720

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5581

```

accgtggaaa cgcgggccat ggcggcaccg cggcaaatac ccagccacat agtgcgcctc
60
aagcccagct gctctacaga ctgcgtcttc acccggacgc cggtgcccac cgtgtctctc
120
gcgtcccgcg agctgcctgt ctgcgtctgg caggtcaccg agccgtcaag caagaatctg
180
tgggagcaga tctgcaagga gtatgaagct gagcagcctc cctttccaga aggatataaa
240
gtcaaacagg agcctgtgat tacggttgcg ccagtagagg aaatgctttt tcatggcttc
300
agtgcagagc actattttcc gggtttcccat ttcaccatga tctcacgtac accctgtcct
360
caagataaat cggaacaat caacccaaaa acatgttctc ccaaagaata ttggaaact
420
ttcatctttc ctgttctgct tcccggaatg gctagcctgc ttcaccaagc gaagaaagaa
480
aaatgttttg aggtcagttg tttggcagga tttctttatt ttgagattct caatcattca
540
ttattatcag atgatagctc attatcttgg taccatcagg ttgttctcca gatgacctc
600
tcgggagggg aagcctgtgt ttggggtcac ttaccagtt ccagccacac catctagttg
660
tgcacataca tgcgtgcca tctgtctggc cacttggact ccggagagct tttccgcctt
720

```

&lt;210&gt; 5582

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5582

Met Ala Ala Pro Arg Gln Ile Pro Ser His Ile Val Arg Leu Lys Pro

1	5	10	15
Ser Cys Ser Thr Asp Ser Ser Phe Thr Arg Thr Pro Val Pro Thr Val			
20	25	30	
Ser Leu Ala Ser Arg Glu Leu Pro Val Ser Ser Trp Gln Val Thr Glu			
35	40	45	
Pro Ser Ser Lys Asn Leu Trp Glu Gln Ile Cys Lys Glu Tyr Glu Ala			
50	55	60	
Glu Gln Pro Pro Phe Pro Glu Gly Tyr Lys Val Lys Gln Glu Pro Val			
65	70	75	80
Ile Thr Val Ala Pro Val Glu Glu Met Leu Phe His Gly Phe Ser Ala			
85	90	95	
Glu His Tyr Phe Pro Val Ser His Phe Thr Met Ile Ser Arg Thr Pro			
100	105	110	
Cys Pro Gln Asp Lys Ser Glu Thr Ile Asn Pro Lys Thr Cys Ser Pro			
115	120	125	
Lys Glu Tyr Leu Glu Thr Phe Ile Phe Pro Val Leu Leu Pro Gly Met			
130	135	140	
Ala Ser Leu Leu His Gln Ala Lys Lys Glu Lys Cys Phe Glu Val Ser			
145	150	155	160
Cys Leu Ala Gly Phe Leu Tyr Phe Glu Ile Leu Asn His Ser Leu Leu			
165	170	175	
Ser Asp Asp Ser Ser Leu Ser Trp Tyr His Gln Val Val Leu Gln Met			
180	185	190	
Thr Pro Ser Gly Gly Lys Ala Cys Val Trp Gly His Leu Pro Ser Ser			
195	200	205	
Ser His Thr Ile			
210			

&lt;210&gt; 5583

&lt;211&gt; 2101

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5583

nnaggccgcg actgcgtgct gctgcaagag gactttctgg cgcacagggg cgcacccac

60

gtctacctgc agcgcattcca gctcaacaac cccacggagc gcgtagccgc gctgcagact

120

gtggggccca ctgccggccc agcccccaat gccttcacca gtaccctgga gaaggtcgga

180

gaccatcagt tctctctcta ctcaggccgg tccccgccta cgccactgg gttggtgcac

240

ctgggtggtg tggccgcca gaagctggtg aaccgcctcc aagtggctcc caagacgcag

300

ctggatgaga cggtagctg ggtggtgcac gtctctggcc ccattaaccc ccaggtgctc

360

aaaagcaaag cagccaagga gctcaaggcg ctgcaggact tggcacggaa ggaaatgctg

420

gagctcttgg acatgccagc ggaggagctg cttcaagacc accagctcct ctgggctcag

480

ctcttcagcc caggagtga aatgaagaag atcactgaca cccacacgcc gtctggcctc

540

accgtgaacc tgacgtcta ttacatgctc tctgctcgc cagccccact gctcagcccc

600



tccttgagcc acagggagcg agaccagatg gagtcgacgc tcaactatga agatcactgc  
660  
ttcagcgggc acgccaccat gcacgccgag aacctgtggc cggggcggct gtccctccgtc  
720  
cagcagatcc tgcagctctc tgacctgtgg aggctgaccc tccagaagcg tggtgcaag  
780  
gggctgggga aggtgggtgc cccaggcatc ctgcagggga tgggtctcag ctttgggggg  
840  
ctgcagttca cagagaacca cctccagttc caggccgacc ccgacgtgct gcacaacagc  
900  
tatgcattgc atggcatccg ctacaagaac gaccatatca acctggccgt gctgcggatg  
960  
ccgagggcaa gccctaccta cactgttccg tggagtcccg tggccagcct gtcanagatc  
1020  
tatgcctgca aggcaggctg cctggacgag ccagtggagc tgacctcggc gcccacgggc  
1080  
cacaccttct cggcatgggt gacacagccc atcacgccac tgctctacat ctccaccgac  
1140  
ctcacacacc tgcaggacct gcggcacacg ctgcacctca aggccatcct ggcccatgat  
1200  
gagcacatgg cccagcagga ccccgggctg cccttctctt tctggttcag cgtggcctcc  
1260  
ctaatacccc tcttccacct ctctctcttc aagctcatct acaacgagta ctgtgggcct  
1320  
ggagccaagc ccctcttcag gagtaaggaa gatcccagtg tctgagtga ctaacagtcc  
1380  
tgctttcagc caccatttgc acaagacacc cagcactgaa agtcccgtg ccaggagcaa  
1440  
gggatacctt ggaagcacc gccctttgtg ccttgttggg ggaaaccggt gacgcagaag  
1500  
tgagtgtgga tacaccagag tttgcattgg aaggaatgag tgtcacgtgg ggaggggaag  
1560  
ggccagtgga ccttttgtaa gctttccact caataaaatg aacctgtatg gcaaatactt  
1620  
gaaatggaac tcaactcttc cactttcccc ctttcttctg tcccaggaaa tagatcatct  
1680  
tttgaaaaga ctcttgtcta ggaaaagttg tgtccttttc ctaatttaac gtgttcttcc  
1740  
ttaatgaagt tttaatttat ttttgttgag attttgcag atggctttt catcccctgt  
1800  
agatgggtgag tgttggcggg gatgtccgtc tcggcgttcg gaggccccac ggtcccagg  
1860  
ctgggcgggg gccccccagg gtggctgtgc tgctgcctgt aggaggggtgc gggttgtgct  
1920  
gtcactctcg ggtttgcacg ccttttttta ggagcctgtg gacatctgtg gttttgtact  
1980  
ttggggcttc aggggaggtg tttaacttcc tagtgattga tgattgtcag gttttgaaat  
2040  
accaaagctt ttttgttctg tttttaaata aatatcttcc aaactttaaa aaaaaaaaaa  
2100  
a  
2101

&lt;210&gt; 5584

&lt;211&gt; 454

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5584

Xaa Gly Arg Asp Cys Val Leu Leu Gln Glu Asp Phe Leu Ala His Arg  
 1 5 10 15  
 Gly Arg Pro His Val Tyr Leu Gln Arg Ile Gln Leu Asn Asn Pro Thr  
 20 25 30  
 Glu Arg Val Ala Ala Leu Gln Thr Val Gly Pro Thr Ala Gly Pro Ala  
 35 40 45  
 Pro Asn Ala Phe Thr Ser Thr Leu Glu Lys Val Gly Asp His Gln Phe  
 50 55 60  
 Leu Leu Tyr Ser Gly Arg Ser Pro Pro Thr Pro Thr Gly Leu Val His  
 65 70 75 80  
 Leu Val Val Val Ala Ala Lys Lys Leu Val Asn Arg Leu Gln Val Ala  
 85 90 95  
 Pro Lys Thr Gln Leu Asp Glu Thr Val Leu Trp Val Val His Val Ser  
 100 105 110  
 Gly Pro Ile Asn Pro Gln Val Leu Lys Ser Lys Ala Ala Lys Glu Leu  
 115 120 125  
 Lys Ala Leu Gln Asp Leu Ala Arg Lys Glu Met Leu Glu Leu Leu Asp  
 130 135 140  
 Met Pro Ala Ala Glu Leu Leu Gln Asp His Gln Leu Leu Trp Ala Gln  
 145 150 155 160  
 Leu Phe Ser Pro Gly Val Glu Met Lys Lys Ile Thr Asp Thr His Thr  
 165 170 175  
 Pro Ser Gly Leu Thr Val Asn Leu Thr Leu Tyr Tyr Met Leu Ser Cys  
 180 185 190  
 Ser Pro Ala Pro Leu Leu Ser Pro Ser Leu Ser His Arg Glu Arg Asp  
 195 200 205  
 Gln Met Glu Ser Thr Leu Asn Tyr Glu Asp His Cys Phe Ser Gly His  
 210 215 220  
 Ala Thr Met His Ala Glu Asn Leu Trp Pro Gly Arg Leu Ser Ser Val  
 225 230 235 240  
 Gln Gln Ile Leu Gln Leu Ser Asp Leu Trp Arg Leu Thr Leu Gln Lys  
 245 250 255  
 Arg Gly Cys Lys Gly Leu Val Lys Val Gly Ala Pro Gly Ile Leu Gln  
 260 265 270  
 Gly Met Val Leu Ser Phe Gly Gly Leu Gln Phe Thr Glu Asn His Leu  
 275 280 285  
 Gln Phe Gln Ala Asp Pro Asp Val Leu His Asn Ser Tyr Ala Leu His  
 290 295 300  
 Gly Ile Arg Tyr Lys Asn Asp His Ile Asn Leu Ala Val Leu Arg Met  
 305 310 315 320  
 Pro Arg Ala Ser Pro Thr Tyr Thr Cys Pro Trp Ser Pro Val Ala Ser  
 325 330 335  
 Leu Ser Xaa Ile Tyr Ala Cys Lys Ala Gly Cys Leu Asp Glu Pro Val  
 340 345 350  
 Glu Leu Thr Ser Ala Pro Thr Gly His Thr Phe Ser Val Met Val Thr  
 355 360 365  
 Gln Pro Ile Thr Pro Leu Leu Tyr Ile Ser Thr Asp Leu Thr His Leu  
 370 375 380  
 Gln Asp Leu Arg His Thr Leu His Leu Lys Ala Ile Leu Ala His Asp

```

385          390          395          400
Glu His Met Ala Gln Asp Pro Gly Leu Pro Phe Leu Phe Trp Phe
          405          410          415
Ser Val Ala Ser Leu Ile Thr Leu Phe His Leu Phe Leu Phe Lys Leu
          420          425          430
Ile Tyr Asn Glu Tyr Cys Gly Pro Gly Ala Lys Pro Leu Phe Arg Ser
          435          440          445
Lys Glu Asp Pro Ser Val
          450

```

&lt;210&gt; 5585

&lt;211&gt; 740

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5585

```

tttttttttt gctttttttt ttttttttta ctttgaacat tagcattaag ttggttacgc
60
tacacatcca aaggcccagc atctcagaaa aatcattagg cggcacacct gtaccagagt
120
ctcacaaaga taaaatatac aatgctacat tgagtgggta aaaatacaca aaaaagtagt
180
tttaacaatc tataaatatt ttatacttaa aatcatgatt gagttgaaat aaaaaagtagt
240
atttcaattg ctaaaaaaat aatatcggta tagttaacac aagggggaaa tcagttacatt
300
gaggggatctg acaggatgct ggaaaaaatg actcagggaa gccgggcagc atgggctcct
360
ttggagattc aggagcggag ctcaattcca cctcactgca gttccctggg gccaaagcagc
420
cctcctctcc ccagtatctt tcccatctta agagatcctg tctacctac ctgtcacctc
480
cccaacccaa agactcctct aaactctctt gcagcatgac agctgcctgc cctacactga
540
gtctacttga ctttcaattg cgtctccgca gagaggtagg agagggacac tgccccattc
600
tggaattgac ataagtaccc cagccacatg gccttcaccc ttatgaccta gcaggcagaa
660
cagggaccaa gcagcttcta ttttgtcaaa ctcttttggg caaatattca acattcaaca
720
acaagctttg taaacctaac
740

```

&lt;210&gt; 5586

&lt;211&gt; 87

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5586

```

Met Gly Ser Phe Gly Asp Ser Gly Ala Glu Leu Ser Ser Thr Ser Leu
 1          5          10          15
Gln Phe Pro Gly Ala Lys Gln Pro Ser Ser Pro Gln Tyr Leu Ser His
          20          25          30
Leu Lys Arg Ser Cys Pro Thr Tyr Leu Ser Pro Pro Gln Pro Lys Asp

```

35 40 45  
 Ser Ser Lys Leu Leu Cys Ser Met Thr Ala Ala Cys Pro Thr Leu Ser  
 50 55 60  
 Leu Leu Asp Leu Gln Leu Arg Leu Arg Arg Glu Val Gly Glu Gly His  
 65 70 75 80  
 Cys Pro Ile Leu Asp Leu Thr  
 85

<210> 5587

<211> 853

<212> DNA

<213> Homo sapiens

<400> 5587

ttttttagag attagtattt cttgtttcac aagacaccta attgacttgc aacaagacaa  
 60  
 aatattcagt gcatctgggt ggggccaaca tggatgatga cgtgtttctc ataagccctt  
 120  
 ttcattgttt tctcaatttg cttcagaaaa acttgcgagg ttcgtccaca taaagtgtgc  
 180  
 acagtctcca aaaacttcag ctgaaggggg taatacatgg attgaaagag attgtcttga  
 240  
 aagggaaaat cccgtattgc ttcataagat gctctgaacg ttgggttgctt atcgatcatg  
 300  
 tagacgcctc gggttccatg cagaacagac acaccttcat gctcagcctc tctgcagttg  
 360  
 cttccgtaca tgcagtgatc gggacggtag ttccactggc aggggaatac atagagacac  
 420  
 tctgggttga aataaaaaat aatatttaat aaatcctggt ctccccacgt gatggcattc  
 480  
 ttgtacttct ggtacagagg gtacaacatg tcttcccaag ccaggcctgt tggaatcatg  
 540  
 ctgttcttga actgggtact tcttatccga gttaaatcca ttaacatgac tctgaatta  
 600  
 actcctgcag agccatagaa aggatgccta gcaaagcggc tgtaccagcc aatcttgggg  
 660  
 atttcgtgct cagggggccat ggctgcaagc tgggtggaat taaacagcct cagaagcttc  
 720  
 cagatgtcat caacaggtct cagaaagagg acatcggtgt ccacgtagag aagtgaagtc  
 780  
 acatccttta aaatcacagg aagaaagagt ctctgggcag cacagggttt gaacaatttc  
 840  
 ttccactcct gag  
 853

<210> 5588

<211> 204

<212> PRT

<213> Homo sapiens

<400> 5588

Met Ala Pro Glu His Glu Ile Pro Lys Ile Gly Trp Tyr Ser Arg Phe  
 1 5 10 15  
 Ala Arg His Pro Phe Tyr Gly Ser Ala Gly Val Asn Ser Gly Val Met

	20		25		30
Leu Met Asn Leu Thr Arg Ile Arg Ser Thr Gln Phe Lys Asn Ser Met					
35		40		45	
Ile Pro Thr Gly Leu Ala Trp Glu Asp Met Leu Tyr Pro Leu Tyr Gln					
50		55		60	
Lys Tyr Lys Asn Ala Ile Thr Trp Gly Asp Gln Asp Leu Leu Asn Ile					
65		70		75	80
Ile Phe Tyr Phe Asn Pro Glu Cys Leu Tyr Val Phe Pro Cys Gln Trp					
	85		90		95
Asn Tyr Arg Pro Asp His Cys Met Tyr Gly Ser Asn Cys Arg Glu Ala					
	100		105		110
Glu His Glu Gly Val Ser Val Leu His Gly Asn Arg Gly Val Tyr His					
	115		120		125
Asp Asp Lys Gln Pro Thr Phe Arg Ala Leu Tyr Glu Ala Ile Arg Asp					
	130		135		140
Phe Pro Phe Gln Asp Asn Leu Phe Gln Ser Met Tyr Tyr Pro Leu Gln					
	145		150		155
Leu Lys Phe Leu Glu Thr Val His Thr Leu Cys Gly Arg Ile Pro Gln					
	165		170		175
Val Phe Leu Lys Gln Ile Glu Lys Thr Met Lys Arg Ala Tyr Glu Lys					
	180		185		190
His Val Ile Ile His Val Gly Pro Asn Gln Met His					
	195		200		

&lt;210&gt; 5589

&lt;211&gt; 1327

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5589

```

nncccccttc cccctccac agctgcctcc atttccttaa ggaagggttt tttctctctt
60
ccctccccca caccgtagcg gcgcgcgagc gggccgggcy ggcggccgag tttccaaga
120
gataacttca ccaagatgtc cagtgatagg caaagggtccg atgatgagag cccagcacc
180
agcagtggca gtccagatgc ggaccagcga gaccagccg ctccagagcc tgaagaacaa
240
gaggaaagaa aaccttctgc caccagcag aagaaaaaca ccaaactctc tagcaaaacc
300
actgctaagt tatccactag tgctaaaaga attcagaagg agctagctga aataaccctt
360
gatcctcttc ctaattgcag tgctgggcct aaaggagata acatttatga atggagatca
420
actatacttg gtccaccggg ttctgtatat gaagggtggtg tgttttttct ggatatcaca
480
ttttcatcag attatccatt taagccacca aaggttactt tccgcaccag aatctatcac
540
tgcaacatca acagtcaggg agtcatctgt ctggacatcc ttaaagacaa ctggagtccc
600
gctttgacta tttcaaagg tttgctgtct attgttccc ttttgacaga ctgcaaccct
660
gcggatcttc tggttggaag catagccact cagtatttga ccaacagagc agaacacgac
720

```

aggatagcca gacagtggac caagagatac gcaacataat tcacataatt tgtatgcagt  
 780  
 gtgaaggagc agaaggcatc ttctcactgt gctgcaaatac tttatagcct ttacaatacg  
 840  
 gacttctgtg tatatgttat actgattcta ctctgctttt atccttttga gcttgggaga  
 900  
 ctccccaaaa aggtaaatgc tatcaagagt agaactttgt agctgtagat tagttatggt  
 960  
 taaaacgcct acttgcaagt cttgcttctt tgggatatca aaatgtattt tgtgatgtac  
 1020  
 taaggatact ggtcctgaag tctaccaaatt attatagtgc attttagcct aattcattat  
 1080  
 ctgtatgaag ttataaaagt agctgtagat ggctaggaat tatgtcattt gtattaaacc  
 1140  
 cagatctatt tctgagtatg tggttcatgc tgttgtagaa aatgttttac cttttacctt  
 1200  
 tgtcagtttg taatgagagg atttcctttt acccttttga gctcagagag cacctgatgt  
 1260  
 atcatctcaa acacaataaa catgctcctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1320  
 aaaaaaaa  
 1327

&lt;210&gt; 5590

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5590

Met	Ser	Ser	Asp	Arg	Gln	Arg	Ser	Asp	Asp	Glu	Ser	Pro	Ser	Thr	Ser	1	5	10	15
Ser	Gly	Ser	Ser	Asp	Ala	Asp	Gln	Arg	Asp	Pro	Ala	Ala	Pro	Glu	Pro	20	25	30	
Glu	Glu	Gln	Glu	Glu	Arg	Lys	Pro	Ser	Ala	Thr	Gln	Gln	Lys	Lys	Asn	35	40	45	
Thr	Lys	Leu	Ser	Ser	Lys	Thr	Ala	Lys	Leu	Ser	Thr	Ser	Ala	Lys		50	55	60	
Arg	Ile	Gln	Lys	Glu	Leu	Ala	Glu	Ile	Thr	Leu	Asp	Pro	Pro	Pro	Asn	65	70	75	80
Cys	Ser	Ala	Gly	Pro	Lys	Gly	Asp	Asn	Ile	Tyr	Glu	Trp	Arg	Ser	Thr	85	90	95	
Ile	Leu	Gly	Pro	Pro	Gly	Ser	Val	Tyr	Glu	Gly	Gly	Val	Phe	Phe	Leu	100	105	110	
Asp	Ile	Thr	Phe	Ser	Ser	Asp	Tyr	Pro	Phe	Lys	Pro	Pro	Lys	Val	Thr	115	120	125	
Phe	Arg	Thr	Arg	Ile	Tyr	His	Cys	Asn	Ile	Asn	Ser	Gln	Gly	Val	Ile	130	135	140	
Cys	Leu	Asp	Ile	Leu	Lys	Asp	Asn	Trp	Ser	Pro	Ala	Leu	Thr	Ile	Ser	145	150	155	160
Lys	Val	Leu	Leu	Ser	Ile	Cys	Ser	Leu	Leu	Thr	Asp	Cys	Asn	Pro	Ala	165	170	175	
Asp	Pro	Leu	Val	Gly	Ser	Ile	Ala	Thr	Gln	Tyr	Leu	Thr	Asn	Arg	Ala	180	185	190	
Glu	His	Asp	Arg	Ile	Ala	Arg	Gln	Trp	Thr	Lys	Arg	Tyr	Ala	Thr					

195

200

205

&lt;210&gt; 5591

&lt;211&gt; 2194

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5591

gcggctatgc cgtctggctc tgctcgctct gttgtctctg gggcccggcg gctgggtgctt  
60  
tgcagaaccc ccacgcgaca gctgcgggag gaacttgtca tcaccccgtt gccttcggg  
120  
gacgtagccg ccacattcca gttccgcacg cgttgggatt cggatctgca gcgggaaggga  
180  
gtgtcccatt acaggtctct ccctaaagcc ctgggacagc tgatctccaa gtattctcta  
240  
cgggagctcc acctgtcatt cagcgaaggc ttttgaggga cccgatactg gggggcaccc  
300  
ttcctgcagg ctccgtcagg tgcagagctc tgggtctggt tccaagacac tgtcactgat  
360  
gtggataagt cctggaggga gctcagtaat gtccctctcag ggatcttctg cgcctctctc  
420  
aacttcacg actccaccaa cacagtcact cccactgctt ccttcaaacc cctgggtctg  
480  
gccaatgaca ctgaccacta ctttctgcgc tatgtgtgct tgcgcgggga ggtggtctgc  
540  
accgaaaacc tcaccccctg gaagaagctc ttgccctgta gttccaaggc aggcctctct  
600  
gtgtctgctga aggcagatcg cttgttccac accagctacc actcccagc agtgcatac  
660  
cgcctgttt gcagaaatgc acgtgtact agcatctctt gggagctgag gcagaccctg  
720  
tcagttgtat ttgatgcctt catcacgggg cagggaaga aagactggtc cctcttcgg  
780  
atgttctccc gaacctcac ggagccctgc cccctggctt cagagagccg agtctatgt  
840  
gacatcacca cctacaacca gccctgcctt tgtgtccagg acaacgagac attagaggtg  
900  
caccacccc cgaccactac atatcaggac gtcactctag gcaactcgaa gacctatgcc  
960  
atctatgact tgcttgacac cgccatgac aacaactctc gaaacctcaa catccagctc  
1020  
aagtgaaga gacccccaga gaatgaggcc cccctagtgc ccttctgca tgcccagcgg  
1080  
tacgtgagtg gctatgggct gcagaagggg gagctgagca cactgctgta caacaccac  
1140  
ccataccggg ccttcccggg gctgtgtctg gacaccgtac cctgggtatct ggggtgtat  
1200  
gtgcacccc tcaccatcac ctccaagggc aaggagaaca aaccaagtta catccactac  
1260  
cagcctgccc aggaccggct gcaacccac ctccctggaga tgctgattca gctgccggcc  
1320  
aactcagtca ccaaggtttc catccagttt gagcgggcgc tgctgaagtg gaccgagtac  
1380

acaccagatc ctaaccatgg cttctatgtc agcccatctg tctcagegc ctttgtgccc  
 1440  
 agcatggtag cagccaagcc agtggactgg gaagagagtc cctcttcaa cagcctgttc  
 1500  
 ccagtctctg atggtcttaa ctactttgtg cggctctaca cggagccgct gctggggaac  
 1560  
 ctgccgacac cggacttcag catgccctac aacgtgatct gcctcacgtg cactgtgggtg  
 1620  
 gccgtgtgct acggctcctt ctacaatctc ctcacccgaa ccttccacat cgaggagccc  
 1680  
 cgcacagggt gcctggccaa gcggctggcc aaccttatcc ggcgcgccc aggtgtcccc  
 1740  
 ccactctgat tcttgccctt tccagcagct gcagctgccg tttctctctg gggaggggag  
 1800  
 cccaagggct gtttctgcca cttgctctcc tcagagtggg cttttgaacc aaagtgcctt  
 1860  
 ggaccagggtc agggcctaca gctgtgttgt ccagtagagg agccacgagc caaatgtggc  
 1920  
 atttgaattt gaattaactt agaaattcat ttcctcacct gtagtggcca cctctatatt  
 1980  
 gaggtgctca ataagcaaaa gtggctgggtg gctgctgtat tggacagcac agaaaaagat  
 2040  
 ttccatcacc acagaaaggt cggtggcag cactggccaa ggtgatgggg tgtgctacac  
 2100  
 agtgtatgtc actgtgtagt ggatggagtt tactgtttgt ggaataaaaa cggctgtttc  
 2160  
 cgtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
 2194

&lt;210&gt; 5592

&lt;211&gt; 580

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5592

Met Pro Ser Gly Ser Ala Arg Pro Val Ala Pro Gly Ala Arg Arg Leu  
 1 5 10 15  
 Val Pro Cys Arg Thr Pro Thr Arg Gln Leu Arg Glu Glu Leu Val Ile  
 20 25 30  
 Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln Phe Arg Thr  
 35 40 45  
 Arg Trp Asp Ser Asp Leu Gln Arg Glu Gly Val Ser His Tyr Arg Leu  
 50 55 60  
 Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys Tyr Ser Leu Arg Glu  
 65 70 75 80  
 Leu His Leu Ser Phe Thr Gln Gly Phe Trp Arg Thr Arg Tyr Trp Gly  
 85 90 95Pro Phe Leu  
 Gln Ala Pro Ser Gly Ala Glu Leu Trp Val Trp Phe  
 100 105 110  
 Gln Asp Thr Val Thr Asp Val Asp Lys Ser Trp Arg Glu Leu Ser Asn  
 115 120 125  
 Val Leu Ser Gly Ile Phe Cys Ala Ser Leu Asn Phe Ile Asp Ser Thr  
 130 135 140  
 Asn Thr Val Thr Pro Thr Ala Ser Phe Lys Pro Leu Gly Leu Ala Asn



145					150					155				160
Asp	Thr	Asp	His	Tyr	Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu Val
				165					170					175
Val	Cys	Thr	Glu	Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys Ser
			180					185					190	
Ser	Lys	Ala	Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe His
		195					200					205		
Thr	Ser	Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg Asn
	210				215						220			
Ala	Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser Val
225					230					235				240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser Leu
			245					250						255
Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	Ala Ser
		260					265						270	
Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	Pro	Cys Leu
		275					280					285		
Cys	Val	Gln	Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr Thr
	290					295					300			
Thr	Tyr	Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile Tyr
305					310					315				320
Asp	Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn Ile
			325					330						335
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val Pro
		340						345					350	
Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	Lys Gly
		355					360					365		
Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	Ala	Phe Pro
	370					375					380			
Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	Leu	Tyr	Val His
385					390					395				400
Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	Lys	Pro	Ser	Tyr Ile
			405						410					415
His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	Pro	His	Leu	Leu	Glu Met
			420					425					430	
Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	Thr	Lys	Val	Ser	Ile	Gln Phe
		435					440					445		
Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	Glu	Tyr	Thr	Pro	Asp	Pro	Asn His
	450					455					460			
Gly	Phe	Tyr	Val	Ser	Pro	Ser	Val	Leu	Ser	Ala	Leu	Val	Pro	Ser Met
465					470					475				480
Val	Ala	Ala	Lys	Pro	Val	Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn Ser
			485					490						495
Leu	Phe	Pro	Val	Ser	Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr Thr
		500						505					510	
Glu	Pro	Leu	Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr
		515				520						525		
Asn	Val	Ile	Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly Ser
		530				535					540			
Phe	Tyr	Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg Thr
545					550					555				560
Gly	Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg Gly
			565					570						575
Val	Pro	Pro	Leu											

580

&lt;210&gt; 5593

&lt;211&gt; 3078

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5593

nggacactgc agccggagtc cgggaggggc cgcgcgcga cgtctgaac taggatgtcc

60

cgacatgaag gtgtcagctg tgatgcatgt ttaaaaggaa attttcgagg tgcgagatat

120

aagtgtttta tttgctacga ttacgatctt tgtgcatctt gttatgaaag tgggtcaaca

180

acaacaaggc atacaactga ccaccaatg cagtgcata taacaagggt agattttgat

240

ttatactatg gtggggaagc tttctctgta gagcagccac agtcttttac ttgtccctat

300

tgtggaaaaa tgggctatac ggagacatct cttcaagaac atgttacttc tgaacatgca

360

gaaacatcaa cagaagtgat ttgtccaata tgtgcagcgt tacctggagg cgtcccta

420

catgtcacgg atgactttgc agtcatctt acacttgaac acagagcccc tagagattta

480

gatgaatcga gtggtgttcg acatgtacgt agaatgtttc accctggccg gggattagga

540

ggctcctcgtg ctctagatc aaacatgcac ttactagca gttctactgg tggactttct

600

tcttctcaga gttcatattc tccaagcaat agggaagcca tggatcctat agctgagctt

660

ttatctcagt tatcaggagt gagacgttct gcaggaggac agcttaattc ctctggccct

720

tccgtttctc agttacaaca actgcagatg cagctgcagc tagaacggca gcatgccag

780

gcagcagggc aacaactgga gaccgcagc aacgcaacc ggcgtaacta cacaagcagt

840

gtcaccacta caatcacaca atccacagca acaaccaaca tagctaatac agaaagcagt

900

cagcagactc tacagaattc ccagtttctt ttaacaagg tgaatgatcc taaaatgtct

960

gaaacggagc gccagtcctat ggaaagcgag cgtgcagacc gcagcctgtt tgtccaagag

1020

ctccttctgt ccactttagt gcgtgaagag agtcatcct cagatgagga tgatcggggg

1080

gagatggcag attttggtgc tatgggctgt gtagatatta tgcctttaga tgttgcttta

1140

gaaaaccta atttaaaaga gagtaataa ggaaatgagc ctccaccacc tcctctttga

1200

tgacatccca attgcagac aatgtcctct gtgctgtatt tgccaatgaa agtggacaac

1260

aactatcttg ggtttgttg gtgattgtaa tttcaggtct gtcactcttg ttacattgtg

1320

tacattcaaa aggaagagag aaaatatata tgataatcat ttccacttaa ctaattttta

1380

cttctagcag gtaaagttag gtagcagtgc aggggtgac tctgcttcc tgcacctgac  
1440  
atgcaaaagg ctctcctaact actccacatt caaactgaag aggaaaattg aaatctctaa  
1500  
tgaagctgct gtgtgtatct atgaatatta atgaataaaa actgcttgga tggtttacct  
1560  
taactactgc atgaggtttt ttgcagcgtg catgagtttt agtgaccttg ttatttaaga  
1620  
agttaaatac aaggagtaaa acttaaaaaa aaaatacaaa gcccaaagct ttcccaaaca  
1680  
ttattcaatg gttacacgac gaagtagctt ttgaataatg tctgcctgaa tcacctttct  
1740  
ttgtgtgctt cctacgcaca aagccagctc tgcagtggaa tctggggatt atagccgggt  
1800  
gtggcactcc gccctgtgtg actgtcctgt cgcctgttta gtcactctgc ctgtgtggag  
1860  
ctcagcctgt ctctttaact catctgtaga agacacacca gtaaagctac tgttggaaac  
1920  
tgctgcaggg gcccttgtgt gccctaaaaa caaatcctgt tcatgtttgt ttaaagtctt  
1980  
tactttttgt ggttgtttta aattttttca attgttaaatt atgttttatt cagggtgtaga  
2040  
tgaatttcat ttattgactg ttcaacagag ttaacctgaa ttatgttgct tttgttttta  
2100  
aaaatctcac attctcaatc atattttgca ttatttatgt atttgctttg tagtttgctg  
2160  
agacagatca gtatcagggg agctttgagg atttgccctc ccagatttgt cagtatatta  
2220  
caaccaaatt cttaatgcta attttagcac cttttattta ttgggttttt tctggcataa  
2280  
aaagtaaagc cttttaattg aatcatgcc cctatatgcc tatattatta atcctatgtg  
2340  
taaaaaaat gtacagcttt ttttgggttt gttttgggtt ttggaagggc cgggttattt  
2400  
tttttttctt gtttcagttt ttgtgcatag actttcacia tagctccaag gcagggacag  
2460  
cgggtttggg ggttgggagg gcagtttttg gaatgtaaat ttaggacttt taaaagggtg  
2520  
cgcacagctt ctgataaatt tataactaga cttaacctaa tcatgtctcg ttccagttct  
2580  
cttttctctg agcccttttc aaagtctcct ctctttctcc tgtcactcct ttcccttctt  
2640  
gtccgtgtat ctccgtttct tcaacatgac aagcatacag acttgaacac cctccgggtg  
2700  
ttctcccgag aactgtgaag tccatgttca tccaaatgta accaaaaaag aagtcacctt  
2760  
acatgtctga aaaactgttg ctctctctct gaaacttcaa actccaacga tttccaaata  
2820  
caatagcttt gttttcttta gttctgtaat ggataatgtt taaaggaaaa ctttacacca  
2880  
ggcttctggt tacactagaa gtcaagccca ttagggattt tcattttttt tcatttggtt  
2940  
gttgagaagt ttcaaaaatc agttttcaag ctgtggtctt tcaaacacat ctgcacataa  
3000

gtcacacatt tcaataaagc attttcaaga ctgttgaaaa aaaaaaaaaa aaaaaaaaaa  
 3060  
 aaaaaaaaaa aaaaaaaaaa  
 3078

<210> 5594

<211> 296

<212> PRT

<213> Homo sapiens

<400> 5594

Met	Gly	Tyr	Thr	Glu	Thr	Ser	Leu	Gln	Glu	His	Val	Thr	Ser	Glu	His
1				5					10					15	
Ala	Glu	Thr	Ser	Thr	Glu	Val	Ile	Cys	Pro	Ile	Cys	Ala	Ala	Leu	Pro
			20					25					30		
Gly	Gly	Asp	Pro	Asn	His	Val	Thr	Asp	Asp	Phe	Ala	Ala	His	Leu	Thr
		35				40						45			
Leu	Glu	His	Arg	Ala	Pro	Arg	Asp	Leu	Asp	Glu	Ser	Ser	Gly	Val	Arg
	50					55					60				
His	Val	Arg	Arg	Met	Phe	His	Pro	Gly	Arg	Gly	Leu	Gly	Gly	Pro	Arg
65					70				75					80	
Ala	Arg	Arg	Ser	Asn	Met	His	Phe	Thr	Ser	Ser	Ser	Thr	Gly	Gly	Leu
				85					90					95	
Ser	Ser	Ser	Gln	Ser	Ser	Tyr	Ser	Pro	Ser	Asn	Arg	Glu	Ala	Met	Asp
			100					105					110		
Pro	Ile	Ala	Glu	Leu	Leu	Ser	Gln	Leu	Ser	Gly	Val	Arg	Arg	Ser	Ala
		115					120						125		
Gly	Gly	Gln	Leu	Asn	Ser	Ser	Gly	Pro	Ser	Ala	Ser	Gln	Leu	Gln	Gln
	130					135					140				
Leu	Gln	Met	Gln	Leu	Gln	Leu	Glu	Arg	Gln	His	Ala	Gln	Ala	Ala	Arg
145					150					155					160
Gln	Gln	Leu	Glu	Thr	Ala	Arg	Asn	Ala	Thr	Arg	Arg	Thr	Asn	Thr	Ser
				165					170					175	
Ser	Val	Thr	Thr	Thr	Ile	Thr	Gln	Ser	Thr	Ala	Thr	Thr	Asn	Ile	Ala
			180					185					190		
Asn	Thr	Glu	Ser	Ser	Gln	Gln	Thr	Leu	Gln	Asn	Ser	Gln	Phe	Leu	Leu
	195						200					205			
Thr	Arg	Leu	Asn	Asp	Pro	Lys	Met	Ser	Glu	Thr	Glu	Arg	Gln	Ser	Met
	210					215					220				
Glu	Ser	Glu	Arg	Ala	Asp	Arg	Ser	Leu	Phe	Val	Gln	Glu	Leu	Leu	Leu
225					230					235					240
Ser	Thr	Leu	Val	Arg	Glu	Glu	Ser	Ser	Ser	Ser	Asp	Glu	Asp	Asp	Arg
				245					250					255	
Gly	Glu	Met	Ala	Asp	Phe	Gly	Ala	Met	Gly	Cys	Val	Asp	Ile	Met	Pro
		260					265						270		
Leu	Asp	Val	Ala	Leu	Glu	Asn	Leu	Asn	Leu	Lys	Glu	Ser	Asn	Lys	Gly
	275						280						285		
Asn	Glu	Pro	Pro	Pro	Pro	Pro	Pro	Leu							
	290						295								

<210> 5595

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 5595  
ntgatccctg gctcagacag ttcagtggga gaatccaaag gccttttccc tccttcctga  
60  
gcctccggga aaggaggagg ggcatttggg tccagggtct cagtaccccc tgtgccattt  
120  
gagctgcttg cgctcatcat ctctattaat aaccaacttc cctccccccac tgccagtgtc  
180  
gcccccaagc ctgcccagct cgtgttctcc ggtcacagca gctcagtcct ccaaagctgc  
240  
tggaccccag gggagagctg accactgccc gagcagccgg ctgaatccac ctccacaatg  
300  
ccgctctcag gaacccccgc ccctaataag aagaggaaat ccagcaagct gatcatggaa  
360  
ctcactggag gtggacagga gagctcaggc ttgaacctgg gcaaaaagat cagtgtccca  
420  
agggatgtga tgttggagga actgtcgctg cttaccaacc ggggctccaa gatgttcaaa  
480  
ctgcggcaga tgagggtgga gaagtttatt tatgagaacc accctgatgt tttctctgac  
540  
agctcaatgg atcacttcca gaagttcctt ccaacagtgg ggggacagct gggcacagct  
600  
ggtcagggat tctcatacag caagagcaac ggcagaggcg gcagccaggc agggggcagt  
660  
ggctctgccg gacagtatgg ctctgatcag cagcaccatc tgggctctgg gtctggagct  
720  
gggggtacag gtgggtccgc gggccaggct ggcagaggag gagctgctgg cacagcaggg  
780  
gttgggtgaga caggatcagg agaccaggca ggcggagaag gaaaacatat cactgtgttc  
840  
aagacctata tttcccatg ggagcgagcc atgggggttg acccccagca aaaaatggaa  
900  
cttggcattg acctgctggc ctatggggcc aaagctgaac ttcccaaata taagtccctc  
960  
aacaggacgg caatgcccta tgggtggatat gagaaggcct ccaaacgcat gaccttccag  
1020  
atgcccgaat ttgacctggg gcccttgctg agtgaacccc tggctcctta caacaaaaac  
1080  
ctctccaaca ggccttcttt caatcgaacc cctattccct ggctgagctc tggggagcct  
1140  
gtagactaca acgtggatat tggcatcccc ttggatggag aaacagagga gctgtgaggt  
1200  
gtttctcctc ctgatttga tcatctccc tctctgctc caatttggag aggggaatgt  
1260  
gagcagatag cccccattgt taatccagta tccttatggg aatggaggga aaaaggagag  
1320  
atctaccttt ccactcttta ctccaagtc ccactccag catccttct caccaactca  
1380  
gagctcccc tctacttgct ccatatggaa cctgctcgtt tatggaattt gctctgccac  
1440  
cagtaacagt caataaactt caaggaaaat gaactcatc ttcctttgat atttgagagc  
1500  
agatgaaagc cgagg  
1515

<210> 5596  
 <211> 299  
 <212> PRT  
 <213> Homo sapiens

<400> 5596

```

Met Pro Leu Ser Gly Thr Pro Ala Pro Asn Lys Lys Arg Lys Ser Ser
 1           5           10           15
Lys Leu Ile Met Glu Leu Thr Gly Gly Gln Glu Ser Ser Gly Leu
      20           25           30
Asn Leu Gly Lys Lys Ile Ser Val Pro Arg Asp Val Met Leu Glu Glu
      35           40           45
Leu Ser Leu Leu Thr Asn Arg Gly Ser Lys Met Phe Lys Leu Arg Gln
      50           55           60
Met Arg Val Glu Lys Phe Ile Tyr Glu Asn His Pro Asp Val Phe Ser
      65           70           75           80
Asp Ser Ser Met Asp His Phe Gln Lys Phe Leu Pro Thr Val Gly Gly
      85           90           95
Gln Leu Gly Thr Ala Gly Gln Gly Phe Ser Tyr Ser Lys Ser Asn Gly
      100          105          110
Arg Gly Gly Ser Gln Ala Gly Gly Ser Gly Ser Ala Gly Gln Tyr Gly
      115          120          125
Ser Asp Gln Gln His His Leu Gly Ser Gly Ser Gly Ala Gly Gly Thr
      130          135          140
Gly Gly Pro Ala Gly Gln Ala Gly Arg Gly Gly Ala Ala Gly Thr Ala
      145          150          155          160
Gly Val Gly Glu Thr Gly Ser Gly Asp Gln Ala Gly Gly Glu Gly Lys
      165          170          175
His Ile Thr Val Phe Lys Thr Tyr Ile Ser Pro Trp Glu Arg Ala Met
      180          185          190
Gly Val Asp Pro Gln Gln Lys Met Glu Leu Gly Ile Asp Leu Leu Ala
      195          200          205
Tyr Gly Ala Lys Ala Glu Leu Pro Lys Tyr Lys Ser Phe Asn Arg Thr
      210          215          220
Ala Met Pro Tyr Gly Gly Tyr Glu Lys Ala Ser Lys Arg Met Thr Phe
      225          230          235          240
Gln Met Pro Lys Phe Asp Leu Gly Pro Leu Leu Ser Glu Pro Leu Val
      245          250          255
Leu Tyr Asn Gln Asn Leu Ser Asn Arg Pro Ser Phe Asn Arg Thr Pro
      260          265          270
Ile Pro Trp Leu Ser Ser Gly Glu Pro Val Asp Tyr Asn Val Asp Ile
      275          280          285
Gly Ile Pro Leu Asp Gly Glu Thr Glu Glu Leu
      290          295

```

<210> 5597  
 <211> 2240  
 <212> DNA  
 <213> Homo sapiens

<400> 5597

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct  
 60

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcattga ttcagactct  
120  
ttagcatata cagtagagtt tctaattgtt tcagcattcc ctagtgggcy gttacaagtt  
180  
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg  
240  
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga  
300  
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcatec  
360  
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgttaaccgg caatgagggc  
420  
cgcgtgtctg tggaaaacat caagcagctg ttgcaatctg ccacaaaaga atccagcttt  
480  
gacattattt tgtcagggtt agtcccagga agcaccactc tgcacagtgc tgagattttg  
540  
gctgaaatcg cccggatcct tcggcctggt ggatgtcttt ttctgaagga gccagtagag  
600  
acagctgtag ataacaatag caaagtgaag acagcatcta agctgtgttc agccttgact  
660  
ctttctggtc ttgtggaagt gaaagagctg cagcgggagc ccctaacccc tgaggaagta  
720  
cagtctgttc gagaacacct tggatcatgaa agtgacaacc tgctgtttgt tcagatcaca  
780  
ggcaaaaaac caaactttga agtgggttct tctaggcagc ttaagctttc catcaccaag  
840  
aagtcttctc cttcagtga acctgtctgt gaccctgctg ctgccaagct gtggaccctc  
900  
tcagccaacg atatggagga cgacagcatg gatctcattg actcagatga gctgctggat  
960  
ccagaagatt tgaagaagcc agatccagct tccctgcggg ctgcttcttg tggggaaggg  
1020  
aaaaagagga aggcctgtaa gaactgcacc tgtggccttg ccgaagaact ggaaaaagag  
1080  
aagtcaaggg aacagatgag ctcccaaccc aagtcagctt gtggaaactg ctacctgggc  
1140  
gatgccttcc gctgtgccag ctgcccctac cttgggatgc cagccttcaa acctggggaa  
1200  
aagggtgctt tgagtgatag caatcttcat gatgcctagg aggttctctga catgggaccc  
1260  
atctgtctct ccagccaact cctgtccctc acatcccacc atgggtggctc ctcccacctc  
1320  
ctctggattt gtactctctg agatctgttt gcagagtggg tgcttagcag acagagtga  
1380  
gctggctggg gggcacagtg gtgtgtagtg ctgctgtgta tcaaaagacc aaggattat  
1440  
gggacctggt ttcagaatgg gatgggttct ttcacctcat gttaagagaa gggagtgtgt  
1500  
cctgaagaag cccttcttct gatgttaaaa tgctgaccag aacgctcttg agcccaggca  
1560  
tcgttgagca ttaacactct gtgacagagc tgcagacccc tgccttgagt ctcatctcag  
1620  
caatgctgcc acctcttctg ctttcagagt tgttagttta ctccattctt tgtgacacga  
1680

gtcaagtggc tcacaacctc ctcagggcac cagaggactc actcactggt tgctgtgatg  
 1740  
 atatccagtg tccctctgcc cccctccatc cccaaccaca ttgactgta gcattgcatc  
 1800  
 tgtgtcctgt tgtcatttat gttaaccttc aggtattaaa cttgctgcat atcttgacat  
 1860  
 atcttgagat tctgcatgtc ttgtaaagag aggggatgtg catttggtg tgatgttga  
 1920  
 tagtcacca cgctcagttt ggaccattgg aggaacttag tgtcacgcac aaatggggct  
 1980  
 attcctacgc ttagaatagg gcttgtctgc ccactttaga agagtccagg ttggtgagca  
 2040  
 tttagaggga agcagggcag aactctgaac gacaatacgt ctctctgagc agagaccct  
 2100  
 ttgttcttgt tatccacca tatggacttg gaatcaatct tgccaaatat ttggagagat  
 2160  
 tgtgtggatt taagagacct ggatttttat attttaccag taaataaaag ttttcattga  
 2220  
 tatctgtcct tgaaaaaaaa  
 2240

<210> 5598

<211> 312

<212> PRT

<213> Homo sapiens

<400> 5598

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5					10					15	
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25					30		
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35				40						45			
Gln	Leu	Leu	Gln	Ser	Ala	His	Lys	Glu	Ser	Ser	Phe	Asp	Ile	Ile	Leu
	50					55					60				
Ser	Gly	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala	Glu	Ile	Leu
65					70					75				80	
Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu	Phe	Leu	Lys
			85					90						95	
Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val	Lys	Thr	Ala
			100					105					110		
Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val	Glu	Val	Lys
		115				120						125			
Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln	Ser	Val	Arg
	130					135					140				
Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val	Gln	Ile	Thr
145					150					155					160
Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln	Leu	Lys	Leu
			165					170						175	
Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala	Val	Asp	Pro
			180					185					190		
Ala	Ala	Ala	Lys	Leu	Trp	Thr	Leu	Ser	Ala	Asn	Asp	Met	Glu	Asp	Asp
	195					200					205				
Ser	Met	Asp	Leu	Ile	Asp	Ser	Asp	Glu	Leu	Leu	Asp	Pro	Glu	Asp	Leu



210	215	220
Lys Lys Pro Asp Pro Ala Ser Leu Arg Ala Ala Ser Cys Gly Glu Gly		
225	230	235
Lys Lys Arg Lys Ala Cys Lys Asn Cys Thr Cys Gly Leu Ala Glu Glu		240
	245	250
Leu Glu Lys Glu Lys Ser Arg Glu Gln Met Ser Ser Gln Pro Lys Ser		255
	260	265
Ala Cys Gly Asn Cys Tyr Leu Gly Asp Ala Phe Arg Cys Ala Ser Cys		270
	275	280
Pro Tyr Leu Gly Met Pro Ala Phe Lys Pro Gly Glu Lys Val Leu Leu		285
	290	295
Ser Asp Ser Asn Leu His Asp Ala		300
305	310	

&lt;210&gt; 5599

&lt;211&gt; 4492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5599

ttcccgcccc cagccaaggc tgcgtttac gtgtcggaca ttcaggagct gtacatccgt  
 60  
 gtggttgaca aggtggagat tgggaagaca gtgaaggcat acgtccgcgt gctggacttg  
 120  
 cacaagaagc ccttccttgc caaataacttc ccctttatgg acctgaagct ccgagcagcc  
 180  
 tccccgatca ttacattggt ggcccttgat gaagcccttg acaactacac catcacattc  
 240  
 ctcatccgcg gtgtggccat cggccagacc agtctaactg caagtgtgac caataaagct  
 300  
 ggacagagaa tcaactcagc cccacaacag attgaagtct ttcccccggt caggctgatg  
 360  
 cccaggaagg tgacactgct tateggggcc acgatgcagg tcacctccga gggcggcccc  
 420  
 cagcctcagt ccaacatcct tttctccatc agcaatgaga gcgttgcgct ggtgagcgct  
 480  
 gctgggctgg tacagggcct cgccatcggg aacggcactg tgtctgggct cgtgcaggca  
 540  
 gtggatgcag agaccggcaa ggtggtcac atctctcagg acctcgtgca ggtggagggtg  
 600  
 ctgctgctaa gggccgtgag gatccgcgcc cccatcatgc ggatgaggac gggcaccag  
 660  
 atgccatct atgtcaccgg catcaccaac caccagaacc ctttctcctt tggcaatgcc  
 720  
 gtgccaggcc tgaccttcca ctggtctgtc accaagcggg acgtcctgga cctccgaggg  
 780  
 cggcaccacg aggcgtcgat ccgactcccc tcacagtaca actttgccat gaacgtgtc  
 840  
 ggccgggtaa aaggccggac cgggctgagg gtgggtgtca aggctgtgga cccacatcg  
 900  
 gggcagctgt atggcctggc cagagaactc tcggatgaga tccaagtcca ggtgtttgag  
 960  
 aagctgcagc tgctcaacc tgaaatagaa gcagaacaaa tattaatgtc gcccaactca  
 1020

tatataaagc tgcagacaaa cagggatggt gcagcctctc tgagctaccg cgtcctggat  
1080  
ggacccgaaa aggttccagt tgtgcatggt gatgagaaaag gctttctagc atcaggggtct  
1140  
atgatcggga catccacat cgaagtgatt gcacaagagc cctttggggc caaccaaacc  
1200  
atcattgttg ctgtaaaggt atccccctgtt tcctacctga gggtttccat gagccctgtc  
1260  
ctgcacaccc agaacaagga ggccctgggt gccgtgcctt tgggaatgac cgtgaccttc  
1320  
actgtccact tccacgacaa ctctggagat gtcttccatg ctcacagttc ggtcctcaac  
1380  
tttgccacta acagagacga ctttgtgcag atcggaagg gccccaccaa caacacctgt  
1440  
gttgtccgca cagtcagcgt gggcctgaca ctgctccgtg tgtgggacgc agagcaccgc  
1500  
ggcctctcgg acttcatgcc cctgcctgtc ctacaggcca tctccccaga gctgtctggg  
1560  
gccatggtgg tgggggacgt gctctgtctg gccactgttc tgaccagcct ggaaggcctc  
1620  
tcaggaacct ggagctcctc ggccaacagc atcctccaca tcgaccccaa gacgggtgtg  
1680  
gctgtggccc gggccgtggg atcctgacg gtttactatg aggtcgtgg gcacctgagg  
1740  
acctacaagg aggtggtggt cagcgtccct cagaggatca tggcccgta cctccacccc  
1800  
atccagacaa gcttccagga ggctacagcc tccaaagtga ttgttgccgt gggagacaga  
1860  
agctctaacc tgagaggcga gtgcaccccc acccagaggg aagtcattca ggccttgac  
1920  
ccagagaccc tcatcagctg ccagtcctcag ttcaagccgg ccgtctttga tttccatct  
1980  
caagatgtgt tcaccgtgga gccacagttt gacactgtc tcggccagta cttctgtca  
2040  
atcacaatgc acaggtgac ggacaagcag cggaagcacc tgagcatgaa gaagacagct  
2100  
ctggtggtca gtgcctccct ctccagcagc cacttctcca cagagcaggt gggggccgag  
2160  
gtgccttca gccaggtct ctccgagac caggtgaaa tcttttgag caaccactac  
2220  
accagttccg agatcagggt ccttgggtgc ccggagggtc tggagaactt ggaggtgaaa  
2280  
tccgggtccc cggcgtgct ggcatcgca aaggagaagt cttttgggtg gccagcttc  
2340  
atcacatata cggtcggcgt ctccgacccc gcggtggca gccaaaggcc tctgtccact  
2400  
acctgacct tctccagccc cgtgaccaac caagccattg ccatccagct gacagtggct  
2460  
tttgtgatgg atcgccgtgg gcccggtcct tatggagcca gcctcttcca gcacttctg  
2520  
gattcctacc aggtcatgtt ctccagctc ttcgcctgt tggctgggac agcggtcag  
2580  
atcatagcct accacactgt ctgcacgccc cgggatcttg ctgtgcctgc agccctcacg  
2640

cctcgagcca gccctggaca cagccccac tatttcgctg cctcatcacc cacatctccc  
2700  
aatgcattgc ctctgctcg caaagccagc cctccctcag ggctgtggag cccagcctat  
2760  
gcctccact aggcgcgtg aaggttcccg gaggatgggt ctcagccgag cctcgtgcac  
2820  
ccccaagatg gaacatccct gctgcattca cactggaaca agcccccca gatgagtgcc  
2880  
ccggccccag gccagcttca ctgccgtctc ttcacacaga gctgtagttt cggctctgcc  
2940  
cattagctca ttttatgtag gagttttaaa tgtgtgtttt tttcctttca agtcttacia  
3000  
agctaagact ttttggtca ttcctttttg catggttgtc tagggtttct ggacaatgtg  
3060  
ctggtgcatt tttattttcc tagccttgct aaaatctttc ccttctcaag actttgagca  
3120  
gttagaagtg ctctttagaa gttgtctgtg ggtgatgtta ctgtagtggc ctcagggaaa  
3180  
ggattgtcca gttactttag ggggtttttg gtggggtttt tccccctgtg aaaacttact  
3240  
ttgccctag tctggtgct gctaggactt ctgaggagca atgggacatg agtgtccctg  
3300  
tatctgcgcc actgccgcaa gggaagctc aggaaccagc acctggaggc caggatagcc  
3360  
aagccctggg tgagcgagag gctggagaac acaggagctc acccagggct gctgccaac  
3420  
catgggccac tgtgaacaga cttcagtcct ctgtttttgt ttcataagcc gttgagacat  
3480  
ctgatggact tggcttaggc cctgctggga catcccacgt gtgatccctt tcactccatc  
3540  
aggacaccag gactgtcctt aggaatgt ccttgagatg gcagcaggag tcatattttc  
3600  
tgtgtgtgtg tttcgaaag ccgctgtgtc ctgcctcagc acaaagaccc agtgtcattt  
3660  
gctcctctg ttcctgtgcc actccagaac ctcagcagat ctgagccacc gcctgccagt  
3720  
gtgagaggcg gccactttca tggcagctca tcaggcgcag ggccccagac agcttcccag  
3780  
caggccctag agcccgccct gggccaatga tggagggcgg ccaccagccc agggcctgcc  
3840  
catccagaag ggactcccca gggcctgggg gaggagaccc ttggaaaagt cctctcttcc  
3900  
cagctcctga ttctggatct gagattctca gatcacaggc cctgtgtctc caggccgagg  
3960  
ctgggctacc ctcagggaga tccagagact catgccatg gccatccatg cgtggacgt  
4020  
gtgtggagag tccaggatga cgggatcccg cacaagctcc cttcagtcct tcagggtgtg  
4080  
gccatgtggt tgatttttct aaagctggag aaaggaagaa ttgtgccttg catattactt  
4140  
gagcttaaac tgacaacctg gatgtaaata ggagcctttc tactggttta ttttaataag  
4200  
ttctatgtgc cagtggcttt tgtggtggat cgcctggggc ccggtcctta tggagccagc  
4260

ctcttcacag acttctcgga ttctaccag gtcattgtct tcacgtcttt cgcctgttg  
 4320  
 gctgggacag cggatcatgat catagcctac cacactgtct gcagctttat atatgagtg  
 4380  
 ggcgacatta atatttggtc tgcttctatt tcagggttga gcagctgcag cttctcaaac  
 4440  
 acctggactt ggatctcatc cgagagttct ctggccaggc catacagctg gc  
 4492

<210> 5600

<211> 923

<212> PRT

<213> Homo sapiens

<400> 5600

Phe Pro Ala Pro Ala Lys Ala Val Val Tyr Val Ser Asp Ile Gln Glu  
 1 5 10 15  
 Leu Tyr Ile Arg Val Val Asp Lys Val Glu Ile Gly Lys Thr Val Lys  
 20 25 30  
 Ala Tyr Val Arg Val Leu Asp Leu His Lys Lys Pro Phe Leu Ala Lys  
 35 40 45  
 Tyr Phe Pro Phe Met Asp Leu Lys Leu Arg Ala Ala Ser Pro Ile Ile  
 50 55 60  
 Thr Leu Val Ala Leu Asp Glu Ala Leu Asp Asn Tyr Thr Ile Thr Phe  
 65 70 75 80  
 Leu Ile Arg Gly Val Ala Ile Gly Gln Thr Ser Leu Thr Ala Ser Val  
 85 90 95  
 Thr Asn Lys Ala Gly Gln Arg Ile Asn Ser Ala Pro Gln Gln Ile Glu  
 100 105 110  
 Val Phe Pro Pro Phe Arg Leu Met Pro Arg Lys Val Thr Leu Leu Ile  
 115 120 125  
 Gly Ala Thr Met Gln Val Thr Ser Glu Gly Gly Pro Gln Pro Gln Ser  
 130 135 140  
 Asn Ile Leu Phe Ser Ile Ser Asn Glu Ser Val Ala Leu Val Ser Ala  
 145 150 155 160  
 Ala Gly Leu Val Gln Gly Leu Ala Ile Gly Asn Gly Thr Val Ser Gly  
 165 170 175  
 Leu Val Gln Ala Val Asp Ala Glu Thr Gly Lys Val Val Ile Ile Ser  
 180 185 190  
 Gln Asp Leu Val Gln Val Glu Val Leu Leu Leu Arg Ala Val Arg Ile  
 195 200 205  
 Arg Ala Pro Ile Met Arg Met Arg Thr Gly Thr Gln Met Pro Ile Tyr  
 210 215 220  
 Val Thr Gly Ile Thr Asn His Gln Asn Pro Phe Ser Phe Gly Asn Ala  
 225 230 235 240  
 Val Pro Gly Leu Thr Phe His Trp Ser Val Thr Lys Arg Asp Val Leu  
 245 250 255  
 Asp Leu Arg Gly Arg His His Glu Ala Ser Ile Arg Leu Pro Ser Gln  
 260 265 270  
 Tyr Asn Phe Ala Met Asn Val Leu Gly Arg Val Lys Gly Arg Thr Gly  
 275 280 285  
 Leu Arg Val Val Val Lys Ala Val Asp Pro Thr Ser Gly Gln Leu Tyr  
 290 295 300  
 Gly Leu Ala Arg Glu Leu Ser Asp Glu Ile Gln Val Gln Val Phe Glu

4785

```
<210> 5601
<211> 670
<212> DNA
<213> Homo sapiens
```

4786

&lt;210&gt; 5602

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5602

```

Met Ala Ala Phe Gly Arg Gln Val Leu Asp Trp His Arg Leu Ile Pro
 1              5              10              15
Leu Thr Trp Ala Cys Met Ala Arg Gln Thr Arg His Leu Gly Glu Gln
      20              25              30
Arg Arg Thr Thr Ala Ser Leu Leu Arg Lys Leu Thr Thr Ala Ser Asn
      35              40              45
Gly Gly Val Ile Glu Glu Leu Ser Cys Val Arg Ser Asn Asn Tyr Val
      50              55              60
Gln Glu Pro Glu Cys Arg Arg Asn Leu Val Gln Cys Leu Leu Glu Lys
      65              70              75              80
Gln Gly Thr Pro Val Val Gln Gly Ser Leu Glu Leu Glu Arg Val Met
      85              90              95
Ser Ser Leu Leu Asp Met Gly Phe Ser Asn Ala His Ile Asn Glu Leu
      100             105             110
Leu Ser Val Arg Arg Gly Ala Ser Leu Gln Gln Leu Leu Asp Ile Ile
      115             120             125
Ser Glu Phe Ile Leu Leu Gly Leu Asn Pro Glu Pro Val Cys Val Val
      130             135             140
Leu Lys Lys Ser Pro Gln Leu Leu Lys Leu Pro Ile Met Gln Met Arg
      145             150             155             160
Lys Arg Ser Ser Tyr Leu Gln Lys Leu Gly Leu Gly Glu Gly Lys Leu
      165             170             175
Lys Arg Val Leu Tyr Cys Cys Pro Glu Ile Phe Thr Met Arg Gln Gln
      180             185             190
Asp Ile Asn Asp Thr Val Arg Leu Leu Lys Glu Lys Cys Leu Phe Thr
      195             200             205
Val Pro Leu His Ala
      210

```

&lt;210&gt; 5603

&lt;211&gt; 2070

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5603

```

ngcttctagg ccttctcagt agatggagct aagtaatata tgtatatata ctaaccaca
60
gatataaata tgtctataat tatttctata tttatccatt cgtgtatatg ttaagataaa
120
catgatggag acccttcaaa tttgcttatg ttctttttca gcctatagac cagatataat
180
aattagcttt tcttctcttg cagattccag agagtcctct atttcatatg tgccctccag
240
aacatctctt gtggtattca ctacttggt tctgtgttca tgggagtcac cctcatcat
300
gtctgcaggc cccagggcaa tgtgagtcag gttgttttcc ataatcactc taattggagt
360

```

ttggaggaca ccggggccct gttgtcttca ggccagaaag attatgttac ggtgcagttg  
420  
cagaatgggt agatctggga gctctcaagg tgtagcagga ataagagga gaacacatcg  
480  
agtttgggct atgaatacac tggcagtaag aaagagtttc cttgtgtgga tggctacata  
540  
tatgaccaga acacatggaa aagcactgcg gtgaccaggt ggaacctggt ctgtgaccga  
600  
aaatggcctg caatgctgat ccagccccta tttatgtttg gagtcctact gggatcggtg  
660  
acttttggct acttttctga caggctagga cgccgggtgg tcttgtgggc cacaagcagt  
720  
agcatgtttt tgtttggaat agcagcggcg tttgcagttg attattacac cttcatggct  
780  
gctcgctttt ttcttgccat ggttgcaagt ggctatcttg tgggtggggt tgtctatgtg  
840  
atggaattca ttggcatgaa gtctcggaca tgggcgtctg tccatttgca ttcctttttt  
900  
gcagttggaa cctgctggt ggctttgaca ggatacttg tccaggacctg gtggctttac  
960  
cagatgatec tctccacagt gactgtcccc tttatcctgt gctgttggtt gctcccagag  
1020  
acaccttttt ggcttctctc agagggacga tatgaagaag cacaaaaaat agttgacatc  
1080  
atggccaagt ggaacagggc aagctcctgt aaactgtcag aacttttatc actggacctt  
1140  
caaggctctg ttagtaatag cccactgaa gttcagaagc acaacctatc atatctgttt  
1200  
tataactgga gcattacgaa aaggacactt accgtttggc taatctgggt cactggaagt  
1260  
ttgggattct actcgtttct cttgaattct gttaacttag gaggcaatga atacttaaac  
1320  
ctcttctctc tgggtgtagt ggaaattccc gcctacacct tcgtgtgcat cgccatggac  
1380  
aaggtcggga ggagaacagt cctggcctac tctcttttct gcagtgcact ggctgtggt  
1440  
gtcgttatgg tgatccccca gaaacattat attttgggtg tggtagacagc tatggttga  
1500  
aaatttgcca tcggggcagc atttggcctc atttatcttt atacagctga gctgtatcca  
1560  
accattgtaa gatcgctggc tgtgggaagc ggcagcatgg tgtgtcgctt gccagcatc  
1620  
ctggcgccgt tctctgtgga cctcagcagc atttggatct tcataccaca gttgtttgtt  
1680  
gggactatgg cctcctgag tggagtgtta acactaaagc ttccagaaac ccttgggaaa  
1740  
cggctagcaa ctacttggga ggaggctgca aaactggagt cagagaatga aagcaagtca  
1800  
agcaaattac ttctcacaac taataatagt gggctggaaa aaacggaagc gattaccccc  
1860  
agggattctg gtcttgggtg ataaatgtgc catgctgct gtctagcacc tgaaatatta  
1920  
tttaccctaa tgcctttgta ttagaggaat cttattctca tctcccatat gttgtttgta  
1980



tgtcttttta ataaattttg taagaaaatt ttaaagcaaa tatgttataa aagaaataaa  
 2040  
 aactaagatg aaaattctca gttttaaaaa  
 2070

<210> 5604

<211> 560

<212> PRT

<213> Homo sapiens

<400> 5604

Arg	Phe	Gln	Arg	Val	Leu	Tyr	Phe	Ile	Cys	Ala	Phe	Gln	Asn	Ile	Ser
1				5					10					15	
Cys	Gly	Ile	His	Tyr	Leu	Ala	Ser	Val	Phe	Met	Gly	Val	Thr	Pro	His
			20					25					30		
His	Val	Cys	Arg	Pro	Pro	Gly	Asn	Val	Ser	Gln	Val	Val	Phe	His	Asn
		35					40					45			
His	Ser	Asn	Trp	Ser	Leu	Glu	Asp	Thr	Gly	Ala	Leu	Leu	Ser	Ser	Gly
	50					55					60				
Gln	Lys	Asp	Tyr	Val	Thr	Val	Gln	Leu	Gln	Asn	Gly	Glu	Ile	Trp	Glu
65				70					75					80	
Leu	Ser	Arg	Cys	Ser	Arg	Asn	Lys	Arg	Glu	Asn	Thr	Ser	Ser	Leu	Gly
			85						90					95	
Tyr	Glu	Tyr	Thr	Gly	Ser	Lys	Lys	Glu	Phe	Pro	Cys	Val	Asp	Gly	Tyr
			100					105					110		
Ile	Tyr	Asp	Gln	Asn	Thr	Trp	Lys	Ser	Thr	Ala	Val	Thr	Gln	Trp	Asn
		115					120					125			
Leu	Val	Cys	Asp	Arg	Lys	Trp	Leu	Ala	Met	Leu	Ile	Gln	Pro	Leu	Phe
	130					135					140				
Met	Phe	Gly	Val	Leu	Leu	Gly	Ser	Val	Thr	Phe	Gly	Tyr	Phe	Ser	Asp
145				150					155					160	
Arg	Leu	Gly	Arg	Arg	Val	Val	Leu	Trp	Ala	Thr	Ser	Ser	Ser	Met	Phe
			165						170					175	
Leu	Phe	Gly	Ile	Ala	Ala	Ala	Phe	Ala	Val	Asp	Tyr	Tyr	Thr	Phe	Met
		180					185						190		
Ala	Ala	Arg	Phe	Phe	Leu	Ala	Met	Val	Ala	Ser	Gly	Tyr	Leu	Val	Val
	195						200					205			
Gly	Phe	Val	Tyr	Val	Met	Glu	Phe	Ile	Gly	Met	Lys	Ser	Arg	Thr	Trp
	210				215						220				
Ala	Ser	Val	His	Leu	His	Ser	Phe	Phe	Ala	Val	Gly	Thr	Leu	Leu	Val
225				230					235					240	
Ala	Leu	Thr	Gly	Tyr	Leu	Val	Arg	Thr	Trp	Trp	Leu	Tyr	Gln	Met	Ile
			245						250					255	
Leu	Ser	Thr	Val	Thr	Val	Pro	Phe	Ile	Leu	Cys	Cys	Trp	Val	Leu	Pro
		260					265						270		
Glu	Thr	Pro	Phe	Trp	Leu	Leu	Ser	Glu	Gly	Arg	Tyr	Glu	Glu	Ala	Gln
	275						280					285			
Lys	Ile	Val	Asp	Ile	Met	Ala	Lys	Trp	Asn	Arg	Ala	Ser	Ser	Cys	Lys
	290				295						300				
Leu	Ser	Glu	Leu	Leu	Ser	Leu	Asp	Leu	Gln	Gly	Pro	Val	Ser	Asn	Ser
305				310					315					320	
Pro	Thr	Glu	Val	Gln	Lys	His	Asn	Leu	Ser	Tyr	Leu	Phe	Tyr	Asn	Trp
			325						330					335	
Ser	Ile	Thr	Lys	Arg	Thr	Leu	Thr	Val	Trp	Leu	Ile	Trp	Phe	Thr	Gly

```

          340          345          350
Ser Leu Gly Phe Tyr Ser Phe Ser Leu Asn Ser Val Asn Leu Gly Gly
          355          360          365
Asn Glu Tyr Leu Asn Leu Phe Leu Leu Gly Val Val Glu Ile Pro Ala
          370          375          380
Tyr Thr Phe Val Cys Ile Ala Met Asp Lys Val Gly Arg Arg Thr Val
385          390          395          400
Leu Ala Tyr Ser Leu Phe Cys Ser Ala Leu Ala Cys Gly Val Val Met
          405          410          415
Val Ile Pro Gln Lys His Tyr Ile Leu Gly Val Val Thr Ala Met Val
          420          425          430
Gly Lys Phe Ala Ile Gly Ala Ala Phe Gly Leu Ile Tyr Leu Tyr Thr
          435          440          445
Ala Glu Leu Tyr Pro Thr Ile Val Arg Ser Leu Ala Val Gly Ser Gly
          450          455          460
Ser Met Val Cys Arg Leu Ala Ser Ile Leu Ala Pro Phe Ser Val Asp
465          470          475          480
Leu Ser Ser Ile Trp Ile Phe Ile Pro Gln Leu Phe Val Gly Thr Met
          485          490          495
Ala Leu Leu Ser Gly Val Leu Thr Leu Lys Leu Pro Glu Thr Leu Gly
          500          505          510
Lys Arg Leu Ala Thr Thr Trp Glu Glu Ala Ala Lys Leu Glu Ser Glu
          515          520          525
Asn Glu Ser Lys Ser Ser Lys Leu Leu Leu Thr Thr Asn Asn Ser Gly
          530          535          540
Leu Glu Lys Thr Glu Ala Ile Thr Pro Arg Asp Ser Gly Leu Gly Glu
545          550          555          560

```

&lt;210&gt; 5605

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5605

```

acgcgtgaag gggaactgat gataaacaca aaaggcaatg ttagatggcg ccaggcactg
60
cgagggagac acactgggtc ttgggttaga gcgggaagag gtggtagtga cttcttcagt
120
catccagga ggcctctcca gggaggatga cggaacatca gaggaagaa gcaaggagaa
180
ccagccacac tcagagctgg gaaagagcag caggaagatg ggggcagtga gtgccagggc
240
tctgcagga tgggcttgcc tggcaggag caataccaag gaagttagta gggcccgggt
300
catgccacgg cttgttaggc agaaccctta agtctctttg tagggacccc tttggtctcc
360
cctttgaact acgccc
376

```

&lt;210&gt; 5606

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5606

```

Met Thr Arg Ala Leu Leu Thr Ser Leu Val Leu Leu Pro Ala Arg Gln
 1             5             10             15
Ala His Pro Cys Arg Ala Leu Ala Leu Thr Ala Pro Ile Phe Leu Leu
      20             25             30
Leu Phe Pro Ser Ser Glu Cys Gly Trp Phe Ser Leu Leu Leu Ser Ser
      35             40             45
Asp Val Pro Ser Ser Ser Leu Glu Arg Pro Pro Trp Met Thr Glu Glu
      50             55             60
Val Thr Thr Thr Ser Ser Arg Ser Thr Pro Arg Pro Ser Val Ser Pro
      65             70             75             80
Ser Gln Cys Leu Ala Pro Ser Asn Ile Ala Phe Cys Val Tyr His Gln
      85             90             95
Phe Pro Phe Thr Arg
      100

```

&lt;210&gt; 5607

&lt;211&gt; 320

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5607

```

gtgcacacgc gaggtatagg ctccagactc ctcaccaaga tgggctatga gtttggcaag
60
ggtttggggc gacacgcgga aggccgggtg gagcccatcc atgctgtggt gttgcctcga
120
gggaagtgcg tggaccagtg tgtggagacc ctgcagaagc agaccagggt tggcaaggct
180
ggcaccaaca agccccccag gtgccgggga agagggggcca ggctggggg cgcgccagct
240
cctcggaatg tgtttgactt cctcaatgaa aagctgcaag gtcaggctcc tggggcccta
300
caagccgggc ggcctcagca
320

```

&lt;210&gt; 5608

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5608

```

Val His Thr Arg Gly Ile Gly Ser Arg Leu Leu Thr Lys Met Gly Tyr
 1             5             10             15
Glu Phe Gly Lys Gly Leu Gly Arg His Ala Glu Gly Arg Val Glu Pro
      20             25             30
Ile His Ala Val Val Leu Pro Arg Gly Lys Ser Leu Asp Gln Cys Val
      35             40             45
Glu Thr Leu Gln Lys Gln Thr Arg Val Gly Lys Ala Gly Thr Asn Lys
      50             55             60
Pro Pro Arg Cys Arg Gly Arg Gly Ala Arg Pro Gly Gly Arg Pro Ala
      65             70             75             80
Pro Arg Asn Val Phe Asp Phe Leu Asn Glu Lys Leu Gln Gly Gln Ala
      85             90             95
Pro Gly Ala Leu Gln Ala Gly Arg Pro Gln

```

100

105

&lt;210&gt; 5609

&lt;211&gt; 1843

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5609

tttttttttt tttttttttc aagcaatttt ttccctttat tttttttgtt aaataagatt  
60  
ccagaaagta tagtgcaaac actcagtaga aaagttgcaa ttaagaaatg tacattcaca  
120  
tttaacattt cagtccattc acttttttta aaataaaaat aggacaaatt attcaattac  
180  
ttgtctcaat ttaacaatct tgaaaaagac tggaaggtag cctacagtgt tcagttgaca  
240  
taaaaataga cccgtattga tcatacaaat ctatcatgag aagttacca gtgagagtga  
300  
gttattgtaa ttctgaatgt actcatcgtg ttctcactt ctacagaagc atcctcagt  
360  
agttgtattg tgcgagaaaa tgacaccctt gccacatca ctctccattc catagagggg  
420  
cacaacccta tctagccaaa ccagaagaa cgcaggcgct tacacaactt ttctcggaca  
480  
gtcgagaaaa tccaaaagtg ggctttgggc ttacctaaa taggaatgga atgtaccact  
540  
acgagatggt catcataata aggacattgt tgtttgagcg gggggtgtgc aatcagtata  
600  
aatgaggatg gcggaggaag aggagtgtg actgaaggga ggtggtgcat aataagtga  
660  
cgagctacac aaagctcgag ctacacaaag ctccagctcc acgggctcgc ccttggtcc  
720  
cagggatgct ctgcagccag cgggcggatg acctgaggtc gggcctgggc ctgtcccttt  
780  
gtgcatgcgg cgtgatttca aattcaaact aagttccaca ccattaggag ttttcacggc  
840  
atgcagttcc agagtgcaaa tggcttgcac atgtgcagtt ttacaggtg gaaggcaaga  
900  
ccatacatct ctccacact gggcgtgcct cctagtggac agttgtatgc aagaggcgg  
960  
gatgggctcc ctccagatcc cccaatgtgg gaatggtecc ctgagacttg tgcttcgtgt  
1020  
gcctggggcc cagagttggg tggggggttg ctggtgggag gtgagaaaca agttctggct  
1080  
gccgtcgggc cagcttccca ctgccctcac ctgggaggtg gatgccaca ggcaggatgc  
1140  
tctgggctac tgttgacag tcctgcacga gatatttatt cagcccaca gatttaatat  
1200  
atctcttggg agttcatcta ggctattatg tctgtttaa cattaattct caataagtgc  
1260  
ctgaaagctc ttttgaaagc aacctatttg aaggtctgaa ccgcccggta ccagcaggaa  
1320  
ccaatgccca ggagagggtc agagcacatg tgctctggtg gttgtcaaat ctctcaccat  
1380

ccatcataag cccctctgaac tccctgctgaa atcggccctt tgaacatcct ctaaccctg  
 1440  
 ggaaggcacc cggaccacc tttacctcac cagcagcata tgacaataac attaaatggc  
 1500  
 tctacagcag aggaagatga aagtaaaagt agcaaataca accaatggcc ttcccatagc  
 1560  
 tcacagaact cctgagcaga agctgagcag ggaagaaatg gtgtgtagtt tcaggggtgc  
 1620  
 tggaggtgcc accatttctc cccatttgat gtcagagagg ctttacaaaa aaataaggca  
 1680  
 acagctctta aggagattct gtatatttga aattagacgc aatgacaggt ttcgctccca  
 1740  
 aantatagtt ttagaatata gtctgatatg acaaagtagg gattttttaa gcctaacatt  
 1800  
 ttatttcctt gctggggatc agttagtaaa gaaggaggaa ttc  
 1843

<210> 5610

<211> 153

<212> PRT

<213> Homo sapiens

<400> 5610

Met	Arg	Arg	Asp	Phe	Lys	Phe	Lys	Leu	Ser	Ser	Thr	Pro	Leu	Gly	Val
1				5					10					15	
Phe	Thr	Ala	Cys	Ser	Ser	Arg	Val	Gln	Met	Ala	Cys	Ile	Cys	Ala	Val
		20						25					30		
Phe	Thr	Gly	Gly	Arg	Gln	Asp	His	Thr	Ser	Leu	Pro	His	Trp	Ala	Cys
		35				40						45			
Leu	Leu	Val	Asp	Ser	Cys	Met	Gln	Glu	Ala	Val	Met	Gly	Ser	Leu	Arg
		50				55					60				
Ile	Pro	Gln	Cys	Gly	Asn	Gly	Pro	Leu	Arg	Leu	Val	Leu	Arg	Val	Pro
65					70				75					80	
Gly	Ala	Gln	Ser	Trp	Val	Gly	Gly	Cys	Trp	Trp	Glu	Val	Arg	Asn	Lys
				85				90						95	
Phe	Trp	Leu	Pro	Ser	Gly	Gln	Leu	Pro	Thr	Ala	Leu	Thr	Trp	Glu	Val
			100					105						110	
Asp	Ala	His	Arg	Gln	Asp	Ala	Leu	Gly	Tyr	Cys	Cys	Thr	Val	Leu	His
		115					120						125		
Glu	Ile	Phe	Ile	Gln	Pro	Thr	Arg	Phe	Asn	Arg	Ser	Leu	Gly	Ser	Ser
		130				135								140	
Ser	Arg	Leu	Leu	Cys	Leu	Phe	Lys	His							
145						150									

<210> 5611

<211> 1152

<212> DNA

<213> Homo sapiens

<400> 5611

ngggcgcgtc cctcccggaac tcccgccctc ccggcctccc tggccccgcc tgggaagggg  
 60  
 tgcaaggaag cctcccggcg ctgcgctccg aggcgggaga cagcgtcccc ctccgccctt  
 120

cggttcctgg cgctcagag cccggcccag gccgcggaac ggtgatgctc gggccggacg  
 180  
 ggcgagcgcg gatccctgcg tcccgtgaa aatgtgtgtc tgacatgcaa gtcagtggg  
 240  
 gcagagaccc gtggattgct gtgcctgcc ctccggacct ggatcatgaa ggtgttgga  
 300  
 agaagcttct tctgggtgct gtttcccgct ctccctggg cggtgcaggc tgtggagcac  
 360  
 gaggaggtgg cgcagcgtgt gatcaaactg caccgcgggc gaggggtggc tgccatgcag  
 420  
 agccggcagt gggtcggga cagctgcagg aagctctcag ggcttctccg ccagaagaat  
 480  
 gcagttctga acaaactgaa aactgcaatt ggagcagtgg agaaagacgt gggcctgtcg  
 540  
 gatgaagaga aactgtttca ggtgcacacg ttgaaattt tccagaaaga gctgaatgaa  
 600  
 agtgaaaatt ccgttttcca agctgtctac ggactgcaga gagccctgca gggggattac  
 660  
 aaagatgtcg tgaacatgaa ggagagcagc cggcagcgcc tggaggccct gagagaggct  
 720  
 gcaataaagg aagaacaga atatatggaa cttctggcag cagaaaaaca tcaagttgaa  
 780  
 gcccttaaaa atatgcaaca tcaaaaccaa agtttatcca tgcttgacga gattcttgaa  
 840  
 gatgtaagaa aggcagcgga tcgtctggag gaagagatag aggaacatgc ttttgacgac  
 900  
 aataaatcag tcaagggggg caattttgag gcagttctga ggggtggagga agaagaggcc  
 960  
 aattctaagc aaaatataac aaaacgagaa gtggaggatg acttggttct tagcatgctg  
 1020  
 attgactccc agaacaacca gtatattttg accaagccca gagattcaac catcccacgt  
 1080  
 gcagatcacc actttataaa ggacattggt accataggaa tgctgtcttt gccttggtgc  
 1140  
 tggcgatgta ca  
 1152

<210> 5612

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5612

Met	Lys	Val	Leu	Gly	Arg	Ser	Phe	Phe	Trp	Val	Leu	Phe	Pro	Val	Leu
1			5						10				15		
Pro	Trp	Ala	Val	Gln	Ala	Val	Glu	His	Glu	Glu	Val	Ala	Gln	Arg	Val
			20					25					30		
Ile	Lys	Leu	His	Arg	Gly	Arg	Gly	Val	Ala	Ala	Met	Gln	Ser	Arg	Gln
			35				40					45			
Trp	Val	Arg	Asp	Ser	Cys	Arg	Lys	Leu	Ser	Gly	Leu	Leu	Arg	Gln	Lys
			50				55				60				
Asn	Ala	Val	Leu	Asn	Lys	Leu	Lys	Thr	Ala	Ile	Gly	Ala	Val	Glu	Lys
							70				75			80	
Asp	Val	Gly	Leu	Ser	Asp	Glu	Glu	Lys	Leu	Phe	Gln	Val	His	Thr	Phe

	85		90		95
Glu Ile Phe Gln Lys Glu Leu Asn Glu Ser Glu Asn Ser Val Phe Gln					
	100		105		110
Ala Val Tyr Gly Leu Gln Arg Ala Leu Gln Gly Asp Tyr Lys Asp Val					
	115		120		125
Val Asn Met Lys Glu Ser Ser Arg Gln Arg Leu Glu Ala Leu Arg Glu					
	130		135		140
Ala Ala Ile Lys Glu Glu Thr Glu Tyr Met Glu Leu Leu Ala Ala Glu					
	145		150		155
Lys His Gln Val Glu Ala Leu Lys Asn Met Gln His Gln Asn Gln Ser					
	165		170		175
Leu Ser Met Leu Asp Glu Ile Leu Glu Asp Val Arg Lys Ala Ala Asp					
	180		185		190
Arg Leu Glu Glu Glu Ile Glu Glu His Ala Phe Asp Asp Asn Lys Ser					
	195		200		205
Val Lys Gly Val Asn Phe Glu Ala Val Leu Arg Val Glu Glu Glu Glu					
	210		215		220
Ala Asn Ser Lys Gln Asn Ile Thr Lys Arg Glu Val Glu Asp Asp Leu					
	225		230		235
Val Leu Ser Met Leu Ile Asp Ser Gln Asn Asn Gln Tyr Ile Leu Thr					
	245		250		255
Lys Pro Arg Asp Ser Thr Ile Pro Arg Ala Asp His His Phe Ile Lys					
	260		265		270
Asp Ile Val Thr Ile Gly Met Leu Ser Leu Pro Cys Gly Trp Arg Cys					
	275		280		285

Thr

&lt;210&gt; 5613

&lt;211&gt; 1679

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5613

ggctaaggct gcatcccagg tgagttcccc cccccgtac cccggagggt ttgttggtga  
 60  
 gggttccggg gagcggcctg gagagaggtg gaggcgaagt ctagtttcgc ttcagggagg  
 120  
 ctcagaccct gtgggggtcaa gtcggcgggt gaggccctag gctcagcctg tggggaccgg  
 180  
 cggggactcg gcttgggcag tcttgggaga agctgagccg gctctgctg aagccagttc  
 240  
 tccttgctgc aggtgctggt ggacagcgcg gagggaggggt ccctcgctgc ggcggcgag  
 300  
 ctggccgctc agaagcgca acagagactg cgcaaattcc gggagctgca cctgatgcgg  
 360  
 aatgaagctc gtaaatataa tcaccaggaa gttgtggaag aagataaaag actaaaatta  
 420  
 cctgcaaatt gggaagccaa aaaagctcgt ttggagtggg aactaaagga agaggaaaag  
 480  
 aaaaaggaat gtgcggcaag aggagaagac tatgagaaaag tgaagttgct ggagatcagt  
 540  
 gcagaagatg cagaaagatg ggagaggaaa aagaagagga aaaaccctga tctgggattt  
 600

tcagattatg ctgctgccca gttacgccag tatcatcggt tgaccaagca gatcaaacct  
 660  
 gacatggaaa catatgagag actgagagaa aaacatggag aagagttttt cccaacatcc  
 720  
 aatagtcttc ttcattggaac acatgtgcct tccacagagg aaattgacag gatgggtcata  
 780  
 gatctggaaa aacagattga aaaacgagac aaatatagcc ggagacgtcc ttataatgat  
 840  
 gatgcagata tcgactacat taatgaaagg aatgccaaat tcaacaagaa agctgaaaga  
 900  
 ttctatggga aatacacagc tgaaattaa cagaatttgg aaagaggaaac agctgtctaa  
 960  
 tcccttcaag aactgtttat agaagcttga gaatggggta aaaatttctg ctagcaaaat  
 1020  
 caagttcttt ttgaaatttt atcagtaatc cagaatttag tagtccatgc cttctcactc  
 1080  
 agcattttaga aataaaaaatg tggtttctta aacgtatatc ctttcatgta tatttcacaa  
 1140  
 tttttgtgct tggatataag atgtatttct tgtagtgaag ttgttttgta atctactttg  
 1200  
 tatacattct aattatatta tttttctatg tattttaaat gtatatggct gtttaactct  
 1260  
 tgaagcattt tgggcttaag attgccagca gcacacatca gatgcagtca ttgttgctat  
 1320  
 cagtgtggaa tttgatagag tctagactcg ggccacttgg agttgtgtac tccaaagcta  
 1380  
 aggacagtga tgaggaagat ggcagtggcc accggaggac tggagcagtc cctcctcatg  
 1440  
 gcggcctgtg accaaggctg gggaggagtg gagctatcct tccatgatct gatcatgtac  
 1500  
 ttcggagaga ggctggagtg tgctaccgac gtcgaaatc catgcagtcg gttagaggct  
 1560  
 ggagtgtgct accgacgtcg aatatccatg cagactagaa aaccattat ctcagcccaa  
 1620  
 aatctcctta agctgataag caacttcagc aaagtctcag catacaaaat caatgtaca  
 1679

&lt;210&gt; 5614

&lt;211&gt; 242

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5614

Ser	Gln	Phe	Ser	Leu	Ser	Gln	Val	Leu	Val	Asp	Ser	Ala	Glu	Glu	Gly
1			5					10					15		
Ser	Leu	Ala	Ala	Ala	Glu	Leu	Ala	Ala	Gln	Lys	Arg	Glu	Gln	Arg	
		20					25					30			
Leu	Arg	Lys	Phe	Arg	Glu	Leu	His	Leu	Met	Arg	Asn	Glu	Ala	Arg	Lys
		35					40					45			
Leu	Asn	His	Gln	Glu	Val	Val	Glu	Glu	Asp	Lys	Arg	Leu	Lys	Leu	Pro
	50					55					60				
Ala	Asn	Trp	Glu	Ala	Lys	Lys	Ala	Arg	Leu	Glu	Trp	Glu	Leu	Lys	Glu
65					70					75				80	
Glu	Glu	Lys	Lys	Lys	Glu	Cys	Ala	Ala	Arg	Gly	Glu	Asp	Tyr	Glu	Lys



	85		90		95										
Val	Lys	Leu	Leu	Glu	Ile	Ser	Ala	Glu	Asp	Ala	Glu	Arg	Trp	Glu	Arg
	100		105		110										
Lys	Lys	Lys	Arg	Lys	Asn	Pro	Asp	Leu	Gly	Phe	Ser	Asp	Tyr	Ala	Ala
	115		120		125										
Ala	Gln	Leu	Arg	Gln	Tyr	His	Arg	Leu	Thr	Lys	Gln	Ile	Lys	Pro	Asp
	130		135		140										
Met	Glu	Thr	Tyr	Glu	Arg	Leu	Arg	Glu	Lys	His	Gly	Glu	Glu	Phe	Phe
	145		150		155										
Pro	Thr	Ser	Asn	Ser	Leu	Leu	His	Gly	Thr	His	Val	Pro	Ser	Thr	Glu
	165		170		175										
Glu	Ile	Asp	Arg	Met	Val	Ile	Asp	Leu	Glu	Lys	Gln	Ile	Glu	Lys	Arg
	180		185		190										
Asp	Lys	Tyr	Ser	Arg	Arg	Arg	Pro	Tyr	Asn	Asp	Asp	Ala	Asp	Ile	Asp
	195		200		205										
Tyr	Ile	Asn	Glu	Arg	Asn	Ala	Lys	Phe	Asn	Lys	Lys	Ala	Glu	Arg	Phe
	210		215		220										
Tyr	Gly	Lys	Tyr	Thr	Ala	Glu	Ile	Lys	Gln	Asn	Leu	Glu	Arg	Gly	Thr
	225		230		235										
Ala	Val														

&lt;210&gt; 5615

&lt;211&gt; 1522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5615

ccggctgtat tatctggcta tttcaaacag tttcagaagt ctttacctcc acgattccag  
 60  
 cggcagcagg aacagatgaa acagcagcag tggcagcagc agcaacagca aggtgtactt  
 120  
 ccacagactg ttccttcaca accgtccagt agtactgtcc ctctccacc acacagacct  
 180  
 ctttatcagc ctatgcagcc tcatcctcag catttggtt ctatgggttt tgatccaagg  
 240  
 tggctcatga tgcagtccta catggatcct cgaatgatgt caggaagacc tgctatggat  
 300  
 attccacca ttcacctcgg aatgattcct cctaaacct taatgagaag agaccagatg  
 360  
 gaagggtcac cgaacagttc tgagtcattt gagcatatag ctgatctgc aagagatcac  
 420  
 gcaatttccc tttctgagcc tcgtatgctg tgggggtcag atccctatcc tcatgctgag  
 480  
 cctcaacaag caactactcc caaagcaaca gaagagcctg aggatgtaag gtctgaagct  
 540  
 gcgttgacc aggaacagat tactgctgct tattctgtag aacataatca attagaggct  
 600  
 cacccaaagg cagactttat cagagaatca agtgaggcac aagtacaaaa gtttttaagc  
 660  
 agatctgtgg aagatgttag acctcaccat actgatgcaa ataatcagtc tgcttggttt  
 720  
 gaagcacctg atcaaaagac cttatccact cctcaaggagg agcggatttc agctgtagaa  
 780

agtcagcctt cccgaaaaag aagtgtttcc catggatcta accatacgca aaaaccagac  
 840  
 gagcagagaa gtgaaccatc tgcaggcatt cctaaagtaa ccagcagatg cattgattca  
 900  
 aaagaaccaa tagaaaggcc agaggagaaa ccaaaaaagg aaggctttat acgatcttct  
 960  
 gaaggaccaa aacctgaaaa agtatataaa tctaaatcag aaactcgttg gggcccacga  
 1020  
 ccaagctcta acagaaggga agaagttaat gatagacctg tgagaagatc aggtcccatt  
 1080  
 aaaaaacctg tacttagaga tatgaaagag gaacgggaac agaggaagga gaaagaagga  
 1140  
 gaaaaggccg aaaaggtcac tgaaaaagta gttgtaaagc ctgaaaagac ggaaaagaag  
 1200  
 gatcttcttc ctccccacc accacctcag ccaccagcac caattcagcc acagtcagtt  
 1260  
 ccaccaccaa ttcaaccaga agcagagaaa tttccttcaa cagaaactgc aactttggct  
 1320  
 caaaaacccat ctcaggatac tgagaagcct ctggaacctg tgagtactgt tcaggtagag  
 1380  
 cctgcagtta agactgtaaa ccaacagact atggcagcac cagtagtcaa agaaaaagaa  
 1440  
 ctacaaaaga aagaaagaaa gcaagaaaaa gaaaaagaac tagaacggca gaaagaaaag  
 1500  
 gaaaaagaac tacaaaaaaa aa  
 1522

&lt;210&gt; 5616

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5616

Pro Ala Val Leu Ser Gly Tyr Phe Lys Gln Phe Gln Lys Ser Leu Pro  
 1 5 10 15  
 Pro Arg Phe Gln Arg Gln Gln Glu Gln Met Lys Gln Gln Gln Trp Gln  
 20 25 30  
 Gln Gln Gln Gln Gln Gly Val Leu Pro Gln Thr Val Pro Ser Gln Pro  
 35 40 45  
 Ser Ser Ser Thr Val Pro Pro Pro Pro His Arg Pro Leu Tyr Gln Pro  
 50 55 60  
 Met Gln Pro His Pro Gln His Leu Ala Ser Met Gly Phe Asp Pro Arg  
 65 70 75 80  
 Trp Leu Met Met Gln Ser Tyr Met Asp Pro Arg Met Met Ser Gly Arg  
 85 90 95  
 Pro Ala Met Asp Ile Pro Pro Ile His Pro Gly Met Ile Pro Pro Lys  
 100 105 110  
 Pro Leu Met Arg Arg Asp Gln Met Glu Gly Ser Pro Asn Ser Ser Glu  
 115 120 125  
 Ser Phe Glu His Ile Ala Arg Ser Ala Arg Asp His Ala Ile Ser Leu  
 130 135 140  
 Ser Glu Pro Arg Met Leu Trp Gly Ser Asp Pro Tyr Pro His Ala Glu  
 145 150 155 160  
 Pro Gln Gln Ala Thr Thr Pro Lys Ala Thr Glu Glu Pro Glu Asp Val

```
<400> 5617
nactcaagct gaatgcttta ttgtaatctc ccaaatcctg tggatagcgc ttaaagatta
60
aataagtttt cgtaggttat actatcattt ttttttctga cttttagaaa aaaaatgatc
120
```

atttacttga ttttttttaa gttgtathtt taatttgaga ggatttcaca tgaactgtaa  
180  
tgtttggtt ttcagccagt gcacaaagac tctattagcc ttttcatggc acatgttcac  
240  
accactgtaa atgaaatgag taccagatat taccagaatg agagaagaca caactatacc  
300  
accccaaaga gttttctaga acaaatatca ctgtttaaga acctgttgaa gaagaagcaa  
360  
aatgagggtat ccgagaaaaa agaacgcctg gtgaacggca tccaaaagct aaaaaccaca  
420  
gcctctcagg tgggagatct aaaagccaga cttgcctctc aagaagccga gctgcaactg  
480  
agaaatcatg atgccgaagc tctgatacaca aagatcggcc ttcagacgga gaaagtgagc  
540  
cgggaaaaga ccatcgctga tgctgaggag cgaaagggtga cagccattca gactgaagtg  
600  
ttccagaaac agagagaatg tgaagctgac ttactcaagg ctgagcctgc actggtggct  
660  
gctacagctg cactcaatac actcaacagg gtcaacctca gtgagctgaa agcctttccc  
720  
aaccctocca tcgcagttac caatgttact gcagccgtga tggctcctct ggctcctcgg  
780  
ggaagagtgc ccaaagaccg aagttggaaa gcagctaaag tcttcatggg aaagttgat  
840  
gattttttgc aagcattaat taactatgac aaagagcaca ttccagagaa ctgtctaaaa  
900  
gtggtgaatg aacactatht gaaagacca gagtttaatc caaacctgat tcgaaccaa  
960  
tcttttgag cagctggcct gtgtgcctgg gtcatacaaca tcattaaatt ctatgaggtc  
1020  
tactgtgatg tggagccaaa acgccaagca ttagcccaag caaacttaga actggctgca  
1080  
gctactgaaa aactagaggc tatcaggaaa aagcttgtgg tgagtgcaa ctatgacatt  
1140  
gaaaagtcag agaagattcg ctgggggtcaa tccattaagt cctttgaagc tcaagagaag  
1200  
acactctgtg gagatgttct tctcacggcg gcatttgtgt cttacgtcgg acccttcaca  
1260  
aggcagtatc gccaggagct ggtgcactgc aagtgggttc cctttcttca acagaagggt  
1320  
tccattccac taaccgaagg cctggacttg atatccatgt tgacggatga tgctacaatt  
1380  
gccgcctgga ataacgaagg actgcccagt gacagaatgt ccaccgaaa tgccgctatc  
1440  
ctaacacact gtgagcgctg gcctctggtg atagatcccc agcaacaggg aattaagtgg  
1500  
atcaagaata agtatggaat ggacctgaaa gtcacacatt tgggccagaa agggtttttg  
1560  
aatgccattg aaactgcttt ggcctttggt gatgtcatct taattgaaaa tctcgaggaa  
1620  
acgatagatc cagtcctgga tccactactt ggcaggaaca caattaaaaa aggaaagtat  
1680  
atcaggattg gagataaaga atgtgaatht aacaagaact ttcgccttat ccttcacaca  
1740

aaattggcaa atcctcacta taagccggaa ttacaagctc agacaactct cctcaatttc  
1800  
acagtacag aagatggtct agaagcccag ctgctggcag aggttgtcag tattgaaagg  
1860  
ccagatttgg agaaacttaa gttggtattg acaaagcacc aaaatgattt taaaattgag  
1920  
ctcaagtatc tggaagacga tctccttttg cgcctttctg cggcagaggg aagctttctg  
1980  
gatgacacca aactggtaga gagattggag gcaacaaaga ccaccgtggc agagatagag  
2040  
cacaagggtga ttgaagccaa agaaaatgaa agaaaaatca acgaggcccg agaattgtac  
2100  
agaccagtgg cagcaagagc atctcttctt tattttgtta ttaatgacct ccaaaaaatc  
2160  
aaccctctct accaattctc tttgaaggct tttaacgtgc tgttccacag agcgatcgag  
2220  
caggctgaca aggtggaaga catgcaggga cgcctctcta tctgatgga gagcatcacc  
2280  
catgctgtct tctctacac cagccaggcg ctgtttgaga aggacaagct caccttctg  
2340  
tccagatgg cttttcagat tttgttgaga aagaaagaga tagaccctct tgaattggat  
2400  
ttctgtcttc gattcacagt tgaacacact catctgagtc ccgttgactt cctaacttct  
2460  
cagtcatgga gtgctatcaa ggcaattgcc gtcattggaag aatttcgagg catagaccga  
2520  
gatgtggaag gatctgcaa gcagtggagg aagtgggtag aatccgagtg tccagaaaaa  
2580  
gaaaaattac ctcaagaatg gaagaagaaa agtttaatac agaagctgat tcttctgaga  
2640  
gcaatgcgc ctgacagaat gacgtatgct ctcaaaaatt ttgtagagga aaaactgggt  
2700  
gcgaagtatg tggagaggac cagattggac ttagttaag cattcgaaga aagcagccca  
2760  
gccaccccca tattcttcat cctgtctccg ggggtagatg cccttaaaga cctggagatt  
2820  
cttggcaaaa gacttggctt tacaattgac tctggaaaat tccacaatgt gtcttttaga  
2880  
caaggtcagg agacggtggc agaagtggcc ctggagaaag cttccaaagg aggacactgg  
2940  
gtcatcctcc aaaatgttca tttggtagcc aagtggctag gaaccttga gaagctcctt  
3000  
gaaagattca gccaaaggaag ccacagagat tacagggttt tcatgagtg tgagtctgca  
3060  
cctacaccag atgagcatat catccctcaa ggactcctgg aaaattccat taagatcact  
3120  
aatgaacccc caacagggat gctggccaat ttgcatgcc cctgtacaa ctttgatcag  
3180  
gtaagaaagc gaagcaggct aggagacaa tgaagtcaga gtcattcac aagactgtgg  
3240  
ggcccagaat caaccaggc atgtcattga gagggatgaa gcaagttctt aatgttcgca  
3300  
tgtggaagg taggggtggc cgtgttttaa tctcttgaaa gaattgcccc tgcatttcc  
3360

gatttctaagt accagtaaat atattttcagt ctcaccctaa cattaagaaa acttcagcta  
 3420  
 ctgtgtaggg aaagctaact aggtaacttc ttgaggaggt tgcttttttt tttttttttt  
 3480

<210> 5618

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 5618

His	Lys	Asp	Ser	Ile	Ser	Leu	Phe	Met	Ala	His	Val	His	Thr	Thr	Val
1				5					10					15	
Asn	Glu	Met	Ser	Thr	Arg	Tyr	Tyr	Gln	Asn	Glu	Arg	Arg	His	Asn	Tyr
		20						25					30		
Thr	Thr	Pro	Lys	Ser	Phe	Leu	Glu	Gln	Ile	Ser	Leu	Phe	Lys	Asn	Leu
		35					40					45			
Leu	Lys	Lys	Lys	Gln	Asn	Glu	Val	Ser	Glu	Lys	Lys	Glu	Arg	Leu	Val
	50				55						60				
Asn	Gly	Ile	Gln	Lys	Leu	Lys	Thr	Thr	Ala	Ser	Gln	Val	Gly	Asp	Leu
65					70					75				80	
Lys	Ala	Arg	Leu	Ala	Ser	Gln	Glu	Ala	Glu	Leu	Gln	Leu	Arg	Asn	His
				85					90					95	
Asp	Ala	Glu	Ala	Leu	Ile	Thr	Lys	Ile	Gly	Leu	Gln	Thr	Glu	Lys	Val
			100					105					110		
Ser	Arg	Glu	Lys	Thr	Ile	Ala	Asp	Ala	Glu	Glu	Arg	Lys	Val	Thr	Ala
		115				120						125			
Ile	Gln	Thr	Glu	Val	Phe	Gln	Lys	Gln	Arg	Glu	Cys	Glu	Ala	Asp	Leu
	130					135					140				
Leu	Lys	Ala	Glu	Pro	Ala	Leu	Val	Ala	Ala	Thr	Ala	Ala	Leu	Asn	Thr
145					150					155				160	
Leu	Asn	Arg	Val	Asn	Leu	Ser	Glu	Leu	Lys	Ala	Phe	Pro	Asn	Pro	Pro
			165					170					175		
Ile	Ala	Val	Thr	Asn	Val	Thr	Ala	Ala	Val	Met	Val	Leu	Leu	Ala	Pro
		180						185				190			
Arg	Gly	Arg	Val	Pro	Lys	Asp	Arg	Ser	Trp	Lys	Ala	Ala	Lys	Val	Phe
		195				200					205				
Met	Gly	Lys	Val	Asp	Asp	Phe	Leu	Gln	Ala	Leu	Ile	Asn	Tyr	Asp	Lys
	210				215						220				
Glu	His	Ile	Pro	Glu	Asn	Cys	Leu	Lys	Val	Val	Asn	Glu	His	Tyr	Leu
225					230					235				240	
Lys	Asp	Pro	Glu	Phe	Asn	Pro	Asn	Leu	Ile	Arg	Thr	Lys	Ser	Phe	Ala
			245					250					255		
Ala	Ala	Gly	Leu	Cys	Ala	Trp	Val	Ile	Asn	Ile	Ile	Lys	Phe	Tyr	Glu
		260					265					270			
Val	Tyr	Cys	Asp	Val	Glu	Pro	Lys	Arg	Gln	Ala	Leu	Ala	Gln	Ala	Asn
		275				280						285			
Leu	Glu	Leu	Ala	Ala	Ala	Thr	Glu	Lys	Leu	Glu	Ala	Ile	Arg	Lys	Lys
	290				295						300				
Leu	Val	Val	Ser	Ala	Asn	Tyr	Asp	Ile	Glu	Lys	Ser	Glu	Lys	Ile	Arg
305					310					315				320	
Trp	Gly	Gln	Ser	Ile	Lys	Ser	Phe	Glu	Ala	Gln	Glu	Lys	Thr	Leu	Cys
			325					330					335		
Gly	Asp	Val	Leu	Leu	Thr	Ala	Ala	Phe	Val	Ser	Tyr	Val	Gly	Pro	Phe

4803

770	775	780
Trp Val Glu Ser Glu Cys Pro Glu Lys Glu Lys Leu Pro Gln Glu Trp		
785	790	795
Lys Lys Lys Ser Leu Ile Gln Lys Leu Ile Leu Leu Arg Ala Met Arg		800
	805	810
Pro Asp Arg Met Thr Tyr Ala Leu Arg Asn Phe Val Glu Glu Lys Leu		815
	820	825
Gly Ala Lys Tyr Val Glu Arg Thr Arg Leu Asp Leu Val Lys Ala Phe		830
	835	840
Glu Glu Ser Ser Pro Ala Thr Pro Ile Phe Phe Ile Leu Ser Pro Gly		845
	850	855
Val Asp Ala Leu Lys Asp Leu Glu Ile Leu Gly Lys Arg Leu Gly Phe		860
865	870	875
Thr Ile Asp Ser Gly Lys Phe His Asn Val Ser Leu Gly Gln Gly Gln		880
	885	890
Glu Thr Val Ala Glu Val Ala Leu Glu Lys Ala Ser Lys Gly Gly His		895
	900	905
Trp Val Ile Leu Gln Asn Val His Leu Val Ala Lys Trp Leu Gly Thr		910
	915	920
Leu Glu Lys Leu Leu Glu Arg Phe Ser Gln Gly Ser His Arg Asp Tyr		925
	930	935
Arg Val Phe Met Ser Ala Glu Ser Ala Pro Thr Pro Asp Glu His Ile		940
945	950	955
Ile Pro Gln Gly Leu Leu Glu Asn Ser Ile Lys Ile Thr Asn Glu Pro		960
	965	970
Pro Thr Gly Met Leu Ala Asn Leu His Ala Ala Leu Tyr Asn Phe Asp		975
	980	985
Gln Val Arg Lys Arg Ser Arg Leu Gly Arg Gln		990
995	1000	

&lt;210&gt; 5619

&lt;211&gt; 1219

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5619

aagccggaga gctggagctt tgaagccacc ccggtcaaag gatgctgagt ccggagcgcc  
60  
tagccctacc ggactacgag tatctggctc agcgacatgt cctcacctac atggaggatg  
120  
cagtgtgcca gctgctagaa aacagggaag atattagcca atatggaatt gccaggttct  
180  
tcaactgaata ttttaacagt gtatgccagg gaacacacat tctctttcga gaattcagct  
240  
tcgtccaagc cccccccac aatagggtat catttttacg ggccttctgg agatgcttcc  
300  
gaactgtggg caaaaatggc gatttgctga ccatgaaaga atatcactgt ttgctgcaat  
360  
tactgtgtcc tgatttcccg ctggagctca ctcagaaagc agccaggatt gtgctcatgg  
420  
acgatccat ggactgcttg atgtcttttt cagatttccct ctttgccttc cagatccagt  
480  
tttactactc agaattcctg gacagtgtgg ctgccatcta tgaggacctg ctgtcaggca  
540



agaaccccaa cacagtgtt gtgccgacgt cgtccagtgg gcagcacgc caacgacctg  
 600  
 ccttgggcgg ggccggcacg ctggagggcg tggaggcgtc gctgttctac cagtgtctgg  
 660  
 aaaacctgtg tgatcggcac aagtacagct gcccaccccc agcacttgctc aaagaggccc  
 720  
 tcagcaatgt tcagagactg accttctatg gattcctcat ggctctctca aagcacctg  
 780  
 gaatcaacca agccctcggt aagtcagagc taagcagccg tcagcctctc ctgccgcaca  
 840  
 acacagggag cagctggcct ctgttagcaa cacggctcca gaggggaagg ggcacacca  
 900  
 tctctgcctt gacttcccag ggccggactc aatcccaggg agcaggaata tggcgacaaa  
 960  
 acatggctct tacacattcc catggtaggg gacagccctc cctgctgca gccctgcccc  
 1020  
 aacatgaaac cacctcccca tagcagaagc gccagcccc tcctcagaga accccagctc  
 1080  
 tgctttgggg agcagcctgc aggtcgggca gacacaggac tatttactca gtgacgctag  
 1140  
 agattatata tcagagagac ctgaatccca ttataaaca aggcaaaggt gtgtctgcgg  
 1200  
 agaccttttt tccaagctg  
 1219

&lt;210&gt; 5620

&lt;211&gt; 333

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5620

Met	Leu	Ser	Pro	Glu	Arg	Leu	Ala	Leu	Pro	Asp	Tyr	Glu	Tyr	Leu	Ala
1				5					10					15	
Gln	Arg	His	Val	Leu	Thr	Tyr	Met	Glu	Asp	Ala	Val	Cys	Gln	Leu	Leu
			20					25					30		
Glu	Asn	Arg	Glu	Asp	Ile	Ser	Gln	Tyr	Gly	Ile	Ala	Arg	Phe	Phe	Thr
	35						40					45			
Glu	Tyr	Phe	Asn	Ser	Val	Cys	Gln	Gly	Thr	His	Ile	Leu	Phe	Arg	Glu
	50					55					60				
Phe	Ser	Phe	Val	Gln	Ala	Thr	Pro	His	Asn	Arg	Val	Ser	Phe	Leu	Arg
65					70				75					80	
Ala	Phe	Trp	Arg	Cys	Phe	Arg	Thr	Val	Gly	Lys	Asn	Gly	Asp	Leu	Leu
			85					90					95		
Thr	Met	Lys	Glu	Tyr	His	Cys	Leu	Leu	Gln	Leu	Leu	Cys	Pro	Asp	Phe
			100					105					110		
Pro	Leu	Glu	Leu	Thr	Gln	Lys	Ala	Ala	Arg	Ile	Val	Leu	Met	Asp	Asp
	115						120					125			
Ala	Met	Asp	Cys	Leu	Met	Ser	Phe	Ser	Asp	Phe	Leu	Phe	Ala	Phe	Gln
	130					135					140				
Ile	Gln	Phe	Tyr	Tyr	Ser	Glu	Phe	Leu	Asp	Ser	Val	Ala	Ala	Ile	Tyr
145					150				155					160	
Glu	Asp	Leu	Leu	Ser	Gly	Lys	Asn	Pro	Asn	Thr	Val	Ile	Val	Pro	Thr
			165					170					175		
Ser	Ser	Ser	Gly	Gln	His	Arg	Gln	Arg	Pro	Ala	Leu	Gly	Gly	Ala	Gly

180 185 190  
 Thr Leu Glu Gly Val Glu Ala Ser Leu Phe Tyr Gln Cys Leu Glu Asn  
 195 200 205  
 Leu Cys Asp Arg His Lys Tyr Ser Cys Pro Pro Pro Ala Leu Val Lys  
 210 215 220  
 Glu Ala Leu Ser Asn Val Gln Arg Leu Thr Phe Tyr Gly Phe Leu Met  
 225 230 235 240  
 Ala Leu Ser Lys His Arg Gly Ile Asn Gln Ala Leu Gly Lys Ser Glu  
 245 250 255  
 Leu Ser Ser Arg Gln Pro Leu Leu Pro His Asn Thr Gly Ser Ser Trp  
 260 265 270  
 Pro Leu Leu Ala Thr Arg Leu Gln Arg Gly Arg Gly Ile Thr Ile Ser  
 275 280 285  
 Ala Leu Thr Ser Gln Gly Arg Thr Gln Ser Gln Gly Ala Gly Ile Trp  
 290 295 300  
 Arg Gln Asn Met Ala Leu Thr His Ser His Gly Arg Gly Gln Pro Ser  
 305 310 315 320  
 Leu Pro Ala Ala Leu Pro Gln His Glu Thr Thr Ser Pro  
 325 330

&lt;210&gt; 5621

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5621

tttttgtgaa atagaattta ttgtggetct gattatgtac acgtgagatg gcctggctgg  
 60  
 gccggccggg ctcacatggt ttgtacaata aatacatctg tggggcgggc tctccgcagc  
 120  
 cggaagggc caccgccacg gttcagtcca gcttcgggc tcccagcttc atggggccct  
 180  
 tggccacctt cctctcggcg cgtttggcct ccattctccg ccgcccgtcc tcgcgcttct  
 240  
 tccgggccag ctcagccttg acctgtctg ggtgctggga cgtgcagaca gggtagcgaa  
 300  
 ggggtcgccc ttgtcgctgg actctgggcc accccagtta tactcgctgg ccagccgtgt  
 360  
 accgtcagga ggtggctcct gggagcttgg ctgaaccctg ggcggtggcc ctccccggct  
 420  
 gcggagagcc cgccccacag atgtatttat tgtaca  
 456

&lt;210&gt; 5622

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5622

Met Ala Trp Leu Gly Arg Pro Gly Ser His Gly Leu Tyr Asn Lys Tyr  
 1 5 10 15  
 Ile Cys Gly Ala Gly Ser Pro Gln Pro Gly Arg Ala Thr Ala Thr Val  
 20 25 30  
 Gln Ser Ser Phe Arg Ala Pro Ser Phe Met Gly Pro Leu Ala Thr Phe

35                      40                      45  
 Leu Ser Ala Arg Leu Ala Ser Ile Ser Arg Arg Arg Ser Ser Arg Phe  
 50                      55                      60  
 Phe Arg Ala Ser Ser Ala Leu Thr Cys Pro Gly Cys Trp Asp Val Gln  
 65                      70                      75                      80  
 Thr Gly

&lt;210&gt; 5623

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5623

nctggaagaa ctgcgtcatgc tctttgtagc gtggtgcttc tgttgctcac aggacaactt  
 60  
 gcctttgatg attttcaaga gagttgtgct atgatgtggc aaaagtatgc aggaagcagg  
 120  
 cgggtcaatgc ctctgggagc aaggatcctt ttccacggtg tgttctatgc cgggggcttt  
 180  
 gccattgtgt attacctcat tcaaaagttt cattccaggg ctttatatta caagttggca  
 240  
 gtggagcagc tgcagagcca tcccgaggca caggaagctc tgggccctcc tctcaacatc  
 300  
 cattatctca agctcatcga cagggaatac ttcgtggaca ttgttgatgc caagttg  
 357

&lt;210&gt; 5624

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5624

Met Trp Gln Lys Tyr Ala Gly Ser Arg Arg Ser Met Pro Leu Gly Ala  
 1                      5                      10                      15  
 Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly Gly Phe Ala Ile Val  
 20                      25                      30  
 Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Ala Leu Tyr Tyr Lys Leu  
 35                      40                      45  
 Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly  
 50                      55                      60  
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe  
 65                      70                      75                      80  
 Val Asp Ile Val Asp Ala Lys Leu  
 85

&lt;210&gt; 5625

&lt;211&gt; 1017

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5625

gccgactcgt ggtacctggc gcttctgggc ttcgctgagc acttccgcac ttccagcccc  
 60

cccaaaatcc gcctgtgcgt gcactgcctg caggccgtgt tccccctcaa gccgccgcag  
 120  
 cgcacgcagg cccgtacaca cctgcagctg ggctccgttc tctatcacca caccaagaac  
 180  
 agcgagcagg cgcgagacca cctggagaag gcgtgggtga tatcacagca aatccacag  
 240  
 ttcgaagatg ttaaatttga agcagcaagt ctgttgtctg aattgtactg tcaagagaat  
 300  
 tccgttgatg cagcaaagcc gctgctgcgg aaggcgatcc agatctcaca gcagacccca  
 360  
 tattggcact gccgcctgct cttccagctc gctcaactgc acacgcttga gaaggacctg  
 420  
 gtgtcggcct gtgacctcct ggggttaggg gccgagtacg cccgggtggg gggatctgaa  
 480  
 tacacaggg cgctgttcct cctcagcaag gggatgctgc tgctgatgga gcgaaagctg  
 540  
 caggaggtgc acccgctgct gacctctgc gggcagatcg tggagaactg gcaggggaac  
 600  
 cccatccaga aggagtcgct gcgtgtcttc ttctgggtgc tccaggtcac ccactatctg  
 660  
 gatgccgggc aggtgaagag cgtgaagccg tgtctgaagc agctgcagca gtgcatccag  
 720  
 accatctcca cactgcagca tgatgagatc ctgccagca accccgctga cctcttccac  
 780  
 tggtgcccc aggagcacat gtgtgtgctt gtctacctgg tgactgtgat gcactccatg  
 840  
 caggccggct acctggagaa ggcgcagaag tacacggaca aggcctcat gcagctggag  
 900  
 aagctcaaga tgctggactg cagccccatc ctgtcatcct tccaagtgat cctgctggag  
 960  
 cacatcatca tgtgccgctt tgtcacgggt cacaaggcca cggcgtgca ggagatc  
 1017

&lt;210&gt; 5626

&lt;211&gt; 339

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5626

Ala	Asp	Ser	Trp	Tyr	Leu	Ala	Leu	Leu	Gly	Phe	Ala	Glu	His	Phe	Arg
1				5					10					15	
Thr	Ser	Ser	Pro	Pro	Lys	Ile	Arg	Leu	Cys	Val	His	Cys	Leu	Gln	Ala
			20					25					30		
Val	Phe	Pro	Phe	Lys	Pro	Pro	Gln	Arg	Ile	Glu	Ala	Arg	Thr	His	Leu
			35				40					45			
Gln	Leu	Gly	Ser	Val	Leu	Tyr	His	His	Thr	Lys	Asn	Ser	Glu	Gln	Ala
			50				55				60				
Arg	Ser	His	Leu	Glu	Lys	Ala	Trp	Leu	Ile	Ser	Gln	Gln	Ile	Pro	Gln
					70					75				80	
Phe	Glu	Asp	Val	Lys	Phe	Glu	Ala	Ala	Ser	Leu	Leu	Ser	Glu	Leu	Tyr
				85					90					95	
Cys	Gln	Glu	Asn	Ser	Val	Asp	Ala	Ala	Lys	Pro	Leu	Leu	Arg	Lys	Ala
			100					105						110	
Ile	Gln	Ile	Ser	Gln	Gln	Thr	Pro	Tyr	Trp	His	Cys	Arg	Leu	Leu	Phe

115 120 125  
 Gln Leu Ala Gln Leu His Thr Leu Glu Lys Asp Leu Val Ser Ala Cys  
 130 135 140  
 Asp Leu Leu Gly Val Gly Ala Glu Tyr Ala Arg Val Val Gly Ser Glu  
 145 150 155 160  
 Tyr Thr Arg Ala Leu Phe Leu Leu Ser Lys Gly Met Leu Leu Leu Met  
 165 170 175  
 Glu Arg Lys Leu Gln Glu Val His Pro Leu Leu Thr Leu Cys Gly Gln  
 180 185 190  
 Ile Val Glu Asn Trp Gln Gly Asn Pro Ile Gln Lys Glu Ser Leu Arg  
 195 200 205  
 Val Phe Phe Leu Val Leu Gln Val Thr His Tyr Leu Asp Ala Gly Gln  
 210 215 220  
 Val Lys Ser Val Lys Pro Cys Leu Lys Gln Leu Gln Gln Cys Ile Gln  
 225 230 235 240  
 Thr Ile Ser Thr Leu His Asp Asp Glu Ile Leu Pro Ser Asn Pro Ala  
 245 250 255  
 Asp Leu Phe His Trp Leu Pro Lys Glu His Met Cys Val Leu Val Tyr  
 260 265 270  
 Leu Val Thr Val Met His Ser Met Gln Ala Gly Tyr Leu Glu Lys Ala  
 275 280 285  
 Gln Lys Tyr Thr Asp Lys Ala Leu Met Gln Leu Glu Lys Leu Lys Met  
 290 295 300  
 Leu Asp Cys Ser Pro Ile Leu Ser Ser Phe Gln Val Ile Leu Leu Glu  
 305 310 315 320  
 His Ile Ile Met Cys Arg Leu Val Thr Gly His Lys Ala Thr Ala Leu  
 325 330 335  
 Gln Glu Ile

&lt;210&gt; 5627

&lt;211&gt; 1401

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5627

nctctcacac tgtggaattc tctctatcag cctcaaagtc cagatttgga aagggagtct  
 60  
 cagcgagggg cagcagctgg cccaaccogg aggcagagcg gcaactgaac tctagccgga  
 120  
 aagagccagg gttatgtgca catgggaggt ggggaggaca ggggctgtat gtgaccctca  
 180  
 catctgttcc tcgcgcccc gatggcttct gctgcctgct ccatggacct catcgacagc  
 240  
 tttgagctcc tggatctcct gtttgaccgg caggacggca tcttgagaca cgtggagctg  
 300  
 ggcgagggct ggggtcacgt caaggaccag gtcttgccaa acccggactc tgacgacttc  
 360  
 ctcagctcca tcttgggctc tggagactca ctgccagct cccactctg gtcccccgaa  
 420  
 ggcagtata gtggcatctc cgaagacctc ccctccgacc ccaggacac ccctccacgc  
 480  
 agcggaccag ccacctcccc cgccggctgc catcctgccc agcctggcaa ggggcctg  
 540

ctctcctatc atcctggcaa ctcttgctcc accacaaccc cagggccagt gatccaacaa  
 600  
 cagcatcacc tgggggcctc ctacctcctg cgacctgggg ctgggcactg tcaggagctg  
 660  
 gtgctcaccg aggatgagaa gaagctgctg gctaaagaag gcatcaccct gccactcag  
 720  
 ctgccctca ctaagtacga ggagcgagt ctgaaaaaaa tccgccgaa aatccggaac  
 780  
 aagcagtcgg cgcaagaaag caggaagaag aagaaggaat atatcgatgg cctggagact  
 840  
 cggctctgtt gctgtccttt gccctcatca tctccctc catcagccct tttggccca  
 900  
 acaaaaccga gagccctggg gactttgctg ctgtacgagt gttctccaga actttgcaca  
 960  
 acgatgctgc ctcccgctg gctgctgatg ctgtgccagg ctccgaggcc ccaggacccc  
 1020  
 gaccgagggc tgacacaacc cgagaagagt ctccaggaag ccccggggca gactggggct  
 1080  
 tccaggacac cgcaacctg accaattcga cggaggagct ggacaacgcc accctggtcc  
 1140  
 tgaggtaatgc aacagagggg ctgggccagg tcgccctgct ggactgggtg gcgcctgggc  
 1200  
 cgagcactgg ctcaggacgt gcagggtctg agggggcggg agacgagctg tgagccccac  
 1260  
 caggactatg ctcccaggcc cctctgcca ggggtgcctt ggggatgctg cactgggcag  
 1320  
 ctaccacact ggggatggga cgtgaggcca agacccagc agagatgcca gaatggggga  
 1380  
 ggcacagctc atagccacac a  
 1401

&lt;210&gt; 5628

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5628

Met	Ala	Ser	Ala	Ala	Cys	Ser	Met	Asp	Pro	Ile	Asp	Ser	Phe	Glu	Leu
1				5					10					15	
Leu	Asp	Leu	Leu	Phe	Asp	Arg	Gln	Asp	Gly	Ile	Leu	Arg	His	Val	Glu
		20					25						30		
Leu	Gly	Glu	Gly	Trp	Gly	His	Val	Lys	Asp	Gln	Val	Leu	Pro	Asn	Pro
		35				40					45				
Asp	Ser	Asp	Asp	Phe	Leu	Ser	Ser	Ile	Leu	Gly	Ser	Gly	Asp	Ser	Leu
		50				55					60				
Pro	Ser	Ser	Pro	Leu	Trp	Ser	Pro	Glu	Gly	Ser	Asp	Ser	Gly	Ile	Ser
				70					75					80	
Glu	Asp	Leu	Pro	Ser	Asp	Pro	Gln	Asp	Thr	Pro	Pro	Arg	Ser	Gly	Pro
				85					90					95	
Ala	Thr	Ser	Pro	Ala	Gly	Cys	His	Pro	Ala	Gln	Pro	Gly	Lys	Gly	Pro
			100					105						110	
Cys	Leu	Ser	Tyr	His	Pro	Gly	Asn	Ser	Cys	Ser	Thr	Thr	Thr	Pro	Gly
			115				120					125			
Pro	Val	Ile	Gln	Gln	Gln	His	His	Leu	Gly	Ala	Ser	Tyr	Leu	Leu	Arg

```

      130              135              140
Pro Gly Ala Gly His Cys Gln Glu Leu Val Leu Thr Glu Asp Glu Lys
145              150              155              160
Lys Leu Leu Ala Lys Glu Gly Ile Thr Leu Pro Thr Gln Leu Pro Leu
      165              170              175
Thr Lys Tyr Glu Glu Arg Val Leu Lys Lys Ile Arg Arg Lys Ile Arg
      180              185              190
Asn Lys Gln Ser Ala Gln Glu Ser Arg Lys Lys Lys Lys Glu Tyr Ile
      195              200              205
Asp Gly Leu Glu Thr Arg Ser Cys Cys Cys Pro Leu Pro Ser Ser Ser
      210              215              220
Ser Pro Pro Ser Ala Leu Leu Ala Pro Thr Lys Pro Arg Ala Leu Gly
      225              230              235              240
Thr Leu Arg Leu Tyr Glu Cys Ser Pro Glu Leu Cys Thr Thr Met Leu
      245              250              255
Pro Pro Ala Trp Leu Leu Met Leu Cys Gln Ala Pro Arg Pro Gln Asp
      260              265              270
Pro Asp Pro Arg Leu Thr Gln Pro Glu Lys Ser Leu Gln Glu Ala Pro
      275              280              285
Gly Gln Thr Gly Ala Ser Arg Thr Pro Arg Thr
      290              295

```

&lt;210&gt; 5629

&lt;211&gt; 428

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5629

```

gtgcacgacc ccactgaatc atcccacaac catggatggg agacacactc agtctccttt
60
aacagaagat aaagctgggg cttacagaga atgtacaact tggcccaggg cacaccagtt
120
agccatcagg ggcagnctg ctattcaggt ctgggactgt gggactccag agcccatgtt
180
ttttacgagg atgccatact gccacaatgg atggtgtctt tatctcctga tatatgattg
240
tgtgttggga ggcgtggggg ggcagctgga agaattggaga ggcataattt tggaggatct
300
tccccattc tctgtaccc tctcttggag ctcccagttc catctgagaa attatctact
360
ctgagaaatc gtcacaacac agcatggttg tgagtgcagt ggcagaagcc tgtgcctggg
420
tgtatggg
428

```

&lt;210&gt; 5630

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5630

```

Met Asp Gly Arg His Thr Gln Ser Pro Leu Thr Glu Asp Lys Ala Gly
1      5      10      15
Ala Tyr Arg Glu Cys Thr Thr Trp Pro Arg Ala His Gln Leu Ala Ile

```

```
<210> 5631
<211> 783
<212> DNA
<213> Homo sapiens
```

```
<210> 5632
<211> 183
<212> PRT
<213> Homo sapiens
```

4812



1	5	10	15
Ala Gly Ala Gly Ala Gly His Leu Thr Pro Gln Ala Ser Pro Thr Ser			
20	25	30	
Glu Leu Pro Thr Ala Lys Thr Pro Gly Glu Ala Gly Arg Gly Gly Val			
35	40	45	
Arg Gly Lys Glu Gly Leu Cys Glu Ser Lys Pro His Pro Gln Ser Arg			
50	55	60	
Ala Glu Thr Gln Val Cys Lys Ser His Pro Pro Thr Ser Ser Ser			
65	70	75	80
Phe Glu Ala Ser Ser Thr Arg Gly Arg Ala Gly Ala Ala Gln Arg Pro			
85	90	95	
Glu Lys Gly Lys Pro His Arg Arg Lys Leu Lys Ala Ser Val Pro Cys			
100	105	110	
Val Ser Ala Glu Arg Val Asn Gly Pro Lys Gly Ser Ser Leu Gln Thr			
115	120	125	
Ala Arg Ile His Pro Thr Gly Gly His Arg Thr Arg Pro Gly Pro Ser			
130	135	140	
Ala Ser Val Pro Val Gln Pro Thr Pro Val Gln Pro Gly Ala Leu Ser			
145	150	155	160
Asp Leu Thr Thr Arg Val Pro Ser Thr Cys Val His Thr Gln Met Gln			
165	170	175	
Glu Arg Thr His Thr Thr Val			
180			

&lt;210&gt; 5633

&lt;211&gt; 2181

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5633

gccaatgtcc ctgtggccac tcagctgaga ccgagggcga cctgggcagc tgcgggtgtc  
60  
tgtcacctcc gtgtcccaca tagatgccag gctctgcttc tgtggttctg gaggtcatta  
120  
gtcaattgta tgtggtgctg tctgtcctcc tgattgcaga ggaggaagga accccttaaa  
180  
tgagcgggtt ctgagtgtg gggccgctgg tctgctctgc ctggtgggat tctccagtgc  
240  
tggcttcac tgtgccccag cccactctc accaacaagg agggcgtgaa aatgacaagg  
300  
aatccatccc tagagttcac aggagatcta gggcagagtt tccaagctgc agctgctctg  
360  
gccctgtgtg agctgtgtct ctgaggaagc cccaggctga ggtagctacc aggcggaggc  
420  
tgggtttgga ggctccaca tcaggaatt gagecgtagg ggtttcagcc ttcacgttg  
480  
tcgccgact gtatgggaag tggggtctgg ggtctgcttg cccagtctca ccgtcctctt  
540  
cctcccaaaa gccgcctgga taaggggtg gccgactgg tgcgggagcg tggcgcgga  
600  
ctggtgtgta tcgagggcat gggcgtgct gtccacacaa actaccagc agccctgcgc  
660  
tgcgagagcc tcaagctggc cgtcatcaag aacgcgtggc tggccgagcg gctgggcggc  
720

cggtctttca ggcctatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc  
780  
ggactcttct gcttgtcact tgtccgagtg gcttcagaga ttaaaggggc cccctcataa  
840  
atgtgcctta attttcgcag ataacagggg gaatagacat ctttttggga gtcttccct  
900  
ttgtcaggga gctactcctt agagggacag aggtcatcct ggcgtgcaac tcaggccccg  
960  
ccctgaacga cgtgaccac agcgagtcct tcatcgtggc agagcgtatt gcgggcatgg  
1020  
accctgaccg tgcgcagcct gctggacacc agggagcact gtctgaacga gttcaacttc  
1080  
ccgatccct actccaaagt gaagcagcgg gagaatggcg tggcgtgag gtgcttcccc  
1140  
ggggtcgtgc gctccctgga cgcgctgggc tgggaggaac ggcagctggc gctggtgaaa  
1200  
ggcctcctgg cggggaatgt cttcgactgg ggggccaaag ccgtgtctgc tgccttgaa  
1260  
tccgaccct actttgggtt tgaagaagca aagaggaagt tacaagaaag accctggctc  
1320  
gtggattcct acagcgagtg gcttcagaga ttaaaggggc cccctcataa atgtgcctta  
1380  
attttcgcag ataacagtgg aatagacatc attttgggag tcttccccctt tgtcaggag  
1440  
ctactcctta gaggacaga ggtcatcctg gcgtgcaact caggccccgc cctgaacgac  
1500  
gtgaccaca gcgagtcctt catcgtggca gagcgtattg cgggcatgga cctgtcgtg  
1560  
cactctgcgc tccaggaaga gaggctgctg ctggtgcaga cgggctccag ctccccgtgc  
1620  
ctcgacctca gccgcctgga taaggggctg gccgcactgg tgcgggagcg tggcgcgat  
1680  
ctggtggtca tcgagggcat gggcgtgct gtccacaaa actaccacgc agccctgcgc  
1740  
tgcgagagcc tcaagctggc cgcatcaag aacgcgtggc tggccgagcg gctgggcggc  
1800  
cggtctttca gcgtcatctt caagtacgag gtcccagccg agtgaggcgc tgcagctgcc  
1860  
ggactcttct gcttgtcact tgtcaggaat gtgtttttac caccacaggg aaactcggt  
1920  
caaatcaacg tatttatatg gtactgctgt gacgcggcac atacaccca gccgcacaga  
1980  
tgcgtgtgac ccagaggcga gacgcagctt tgcctggga gacgttcata ttggaatcta  
2040  
tttaactgct aaagaacctt ttatatatat atatatatat aaatagagag atctatacag  
2100  
gtatgtctga cgggacgcag caccgtgggc acgcacaaa tagagttttt aaaagaggaa  
2160  
aaaaaactct atttgggtgcg t  
2181

&lt;210&gt; 5634

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5634

```

Pro Thr Ala Ser Pro Ser Ser Trp Gln Ser Val Leu Arg Ala Trp Thr
 1           5           10           15
Leu Thr Val Arg Ser Leu Leu Asp Thr Arg Glu His Cys Leu Asn Glu
      20           25           30
Phe Asn Phe Pro Asp Pro Tyr Ser Lys Val Lys Gln Arg Glu Asn Gly
      35           40           45
Val Ala Leu Arg Cys Phe Pro Gly Val Val Arg Ser Leu Asp Ala Leu
      50           55           60
Gly Trp Glu Glu Arg Gln Leu Ala Leu Val Lys Gly Leu Leu Ala Gly
65           70           75           80
Asn Val Phe Asp Trp Gly Ala Lys Ala Val Ser Ala Val Leu Glu Ser
      85           90           95
Asp Pro Tyr Phe Gly Phe Glu Glu Ala Lys Arg Lys Leu Gln Glu Arg
      100          105          110
Pro Trp Leu Val Asp Ser Tyr Ser Glu Trp Leu Gln Arg Leu Lys Gly
      115          120          125
Pro Pro His Lys Cys Ala Leu Ile Phe Ala Asp Asn Ser Gly Ile Asp
      130          135          140
Ile Ile Leu Gly Val Phe Pro Phe Val Arg Glu Leu Leu Leu Arg Gly
145          150          155          160
Thr Glu Val Ile Leu Ala Cys Asn Ser Gly Pro Ala Leu Asn Asp Val
      165          170          175
Thr His Ser Glu Ser Leu Ile Val Ala Glu Arg Ile Ala Gly Met Asp
      180          185          190
Pro Val Val His Ser Ala Leu Gln Glu Glu Arg Leu Leu Leu Val Gln
      195          200          205
Thr Gly Ser Ser Ser Pro Cys Leu Asp Leu Ser Arg Leu Asp Lys Gly
      210          215          220
Leu Ala Ala Leu Val Arg Glu Arg Gly Ala Asp Leu Val Val Ile Glu
225          230          235          240
Gly Met Gly Arg Ala Val His Thr Asn Tyr His Ala Ala Leu Arg Cys
      245          250          255
Glu Ser Leu Lys Leu Ala Val Ile Lys Asn Ala Trp Leu Ala Glu Arg
      260          265          270
Leu Gly Gly Arg Leu Phe Ser Val Ile Phe Lys Tyr Glu Val Pro Ala
      275          280          285
Glu

```

&lt;210&gt; 5635

&lt;211&gt; 614

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5635

```

nntgtgaaag atgttgcaga agtgttccag aagtggctga agatagaagg aaaaaagtcg
60
cactgcctat cagaaaaaac aaaacaaaac atgggaaata caaccaccaa attccgtaaa
120
gcactcatca atggtgatga aaacctggcc tgccaaatat atgaaaacaa tcctcagcta
180

```

aaagaatctc ttgatccaaa tacatcttat ggggagccct accagcacaa tactccatta  
 240  
 cattatgctg ctagacatgg aatgaataaa atattaggag atgatttcag aagagcagat  
 300  
 tgtctgcaga tgatcttaaa atggaaagga gcaaaacttg accaggggtga atatgagaga  
 360  
 gcagctattg atgctgttga taacaaaaaa aacacaccct tgcactatgc tgctgcctca  
 420  
 gggatgaaaag cctgtgtaga aaaacatgga ggagacttgt ttgctgagaa tgaaaataaa  
 480  
 gatactcctt gtgattgtgc tgaaaagcaa caccacaaag atttggccct caatctggaa  
 540  
 tctcaaattg tattctcacg ggatcccag gctgaagaaa tagaagctga atatgctgca  
 600  
 ttagacaaac gaga  
 614

&lt;210&gt; 5636

&lt;211&gt; 204

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5636

Xaa	Val	Lys	Asp	Val	Ala	Glu	Val	Phe	Gln	Lys	Trp	Leu	Lys	Ile	Glu
1			5						10					15	
Gly	Lys	Lys	Cys	His	Cys	Leu	Ser	Glu	Lys	Thr	Lys	Gln	Asn	Met	Gly
			20					25					30		
Asn	Thr	Thr	Thr	Lys	Phe	Arg	Lys	Ala	Leu	Ile	Asn	Gly	Asp	Glu	Asn
			35				40					45			
Leu	Ala	Cys	Gln	Ile	Tyr	Glu	Asn	Asn	Pro	Gln	Leu	Lys	Glu	Ser	Leu
	50					55				60					
Asp	Pro	Asn	Thr	Ser	Tyr	Gly	Glu	Pro	Tyr	Gln	His	Asn	Thr	Pro	Leu
65					70					75				80	
His	Tyr	Ala	Ala	Arg	His	Gly	Met	Asn	Lys	Ile	Leu	Gly	Asp	Asp	Phe
			85					90					95		
Arg	Arg	Ala	Asp	Cys	Leu	Gln	Met	Ile	Leu	Lys	Trp	Lys	Gly	Ala	Lys
			100					105					110		
Leu	Asp	Gln	Gly	Glu	Tyr	Glu	Arg	Ala	Ala	Ile	Asp	Ala	Val	Asp	Asn
		115				120						125			
Lys	Lys	Asn	Thr	Pro	Leu	His	Tyr	Ala	Ala	Ala	Ser	Gly	Met	Lys	Ala
		130				135					140				
Cys	Val	Glu	Lys	His	Gly	Gly	Asp	Leu	Phe	Ala	Glu	Asn	Glu	Asn	Lys
145					150					155				160	
Asp	Thr	Pro	Cys	Asp	Cys	Ala	Glu	Lys	Gln	His	His	Lys	Asp	Leu	Ala
			165					170					175		
Leu	Asn	Leu	Glu	Ser	Gln	Met	Val	Phe	Ser	Arg	Asp	Pro	Glu	Ala	Glu
		180						185					190		
Glu	Ile	Glu	Ala	Glu	Tyr	Ala	Ala	Leu	Asp	Lys	Arg				
		195					200								

&lt;210&gt; 5637

&lt;211&gt; 825

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5637

acgcgtccga ggctcctcaa acccagggcc ccacctggca cgtggaggaa gaagagaagg  
 60  
 gcaggaggca ggtgcccagg tgggagcccc ctctgtgccc cctgggagtg tccccccgcg  
 120  
 ccaggtaactc agggccctgc cctcgtggcc ttgtccgctc gccgcgggtg gggctggcac  
 180  
 aaggcccgtt ttggaggaag tggaggctcc caggagaaag gcagtggctg tgatcgacac  
 240  
 gcccaggctc tgccctgcac tgccctggac cagcaggctg cccaccccag acaggtggga  
 300  
 cccctttccc gcatgcagac tctgagcagc agcttctctgt gacccccacc gcgtcctgct  
 360  
 cctcaggctc atgcctgcg ggaacagaag ccaagaccg gtagaaaac caaggtgttt  
 420  
 aaatataaat aagagcgatt cccacagccc caggtgctg gccagcctca caggtgccc  
 480  
 ctggttctgt gacccatccc aggcacacgc tcccctggct gggcgcttg ccagggtcc  
 540  
 cctgtggctg gcgtgtggag acacgtgggc ctttctccac gtgcccacga gggcgtagc  
 600  
 aggtccaag gagggccagc cccggccagc ctgtgtggac cccgcgggc tgccgcgcc  
 660  
 ggagctgctg actgtgtcag agcccggctg cccagcgcgc cggcgccctc cctccagctg  
 720  
 ccagcctgg gatccgtccg ctgtctgtct cctgaaccag ggagtctgac ccactcacag  
 780  
 ctcccatggg gtccgtgcag ccaaggcccc gcagccacac tcaact  
 825

&lt;210&gt; 5638

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5638

Met	Pro	Cys	Gly	Asn	Arg	Ser	Gln	Asp	Pro	Val	Glu	Asn	Pro	Arg	Cys
1				5					10					15	
Leu	Asn	Ile	Asn	Lys	Ser	Asp	Ser	His	Ser	Pro	Thr	Val	Leu	Ala	Ser
			20					25					30		
Leu	Thr	Gly	Ala	Arg	Trp	Phe	Cys	Asp	Pro	Ser	Gln	Ala	His	Ala	Pro
		35					40					45			
Leu	Ala	Gly	Arg	Leu	Ala	Arg	Ala	Pro	Leu	Trp	Leu	Ala	Cys	Gly	Asp
		50				55					60				
Thr	Trp	Ala	Leu	Leu	His	Val	Pro	Thr	Arg	Ala	Val	Ala	Gly	Ser	Lys
65					70				75					80	
Glu	Ala	Gln	Pro	Arg	Pro	Ala	Cys	Val	Asp	Pro	Ala	Gly	Leu	Arg	Ala
			85						90				95		
Pro	Glu	Leu	Leu	Thr	Val	Ser	Glu	Pro	Gly	Cys	Pro	Ala	Pro	Arg	Arg
			100					105					110		
Pro	Pro	Ser	Ser	Cys	Pro	Ala	Trp	Asp	Pro	Ser	Ala	Val	Cys	Leu	Leu
			115					120					125		
Asn	Gln	Gly	Val												

130

&lt;210&gt; 5639

&lt;211&gt; 2433

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5639

natagctaca aaataaaaaa aactaattca aacaaatgta cttatttaaat ccaatatatc  
60  
ccaacaatta ttgcagcaca taatcaatat aaacattata tatatgaact atttgacact  
120  
atttgacatt tcttcttcca catccagtgt atctgacatt tagcgacat ttgatttgca  
180  
ctcaccact ttgaggagct caattgccgc ttaagtcgt ggctagtggc tgccctaaag  
240  
ttcagcaccg ccacggagct ttgggtccac cggactgta aaaaggaagc acttccgtta  
300  
gcatgaccg gctgaagta gggcggaac ggaagtcgt tgtgtatgaa cgcagcggcg  
360  
gacctgtgag gggatccgac ttgccggcag aacttacgt gcgggacccc gggcactgtt  
420  
gctgctgagg gagactgtgg gctgtttagt gccatgcacc ctttacagtg tgcctccaa  
480  
gtgcagaggt ctctgggtg gggaccattg gcctctgtgt cttggctgtc gctgaggatg  
540  
tgcagggcac acagcagtct ctctagtacc atgtgtccca gtccagagag gcaggaggat  
600  
ggagctcgga aggatttcag ctccaggctg gctgctggac cgacttttca acatttttta  
660  
aaaagtgcct cagctectca ggagaagctg tcttcagaag tggaagaccc acctccctat  
720  
ctcatgatgg atgaacttct tggaaggcag agaaaagtct acctcgagac ctatggctgc  
780  
cagatgaatg tgaatgacac agagatagcc tgggtccatct tacagaagag tggctacctg  
840  
cggccagtaa cctccaaggc agatgtgatt ctcttgtca cgtgctctat cagggagaag  
900  
gctgagcaga ccatctggaa ccgtttacat cagcttaaag ccttgaagac aaggcggccc  
960  
cgctcccggt ttcctctgag gattggaatt ctaggctgca tggctgagag gttgaaggag  
1020  
gagattctca acagagagaa aatggtagat attttggctg gtctgatgc ctaccgggac  
1080  
cttccccggc tgctggtgt tgctgagtcg ggccagcaag ctgccaacgt gctgctctct  
1140  
ctggacgaga cctatgctga tgtcatgcca gtccagacaa gcgccagtgc cacgtctgcc  
1200  
tttgtgtcaa tcatgcgagg ctgtgacaac atgtgtagct actgcattgt tcctttcacc  
1260  
cggggcaggg agaggagtcg gcctattgcc tccattctag aggaagtga gaagctttct  
1320  
gagcaggggc tgaaagaagt gacacttctt ggtcagaatg ttaatagttt tcgggacaat  
1380

tcggaggtcc agttcaacag tgcagtgcct accaatctca gtcgtggctt taccaccaac  
 1440  
 tataaaacca agcaaggagg acttcgtttt gctcatcttc tggatcaggt ctccagagta  
 1500  
 gatcctgaaa tgaggatccg ttttacctct cccacccca aggattttcc tgatgaggtt  
 1560  
 ctgcagctga ttcattgagag agataacatc tgtaaacaga tccacctgcc agcccagagt  
 1620  
 ggaagcagcc gtgtgttggg ggcattgcgg aggggatatt caagagaagc ttatgtggag  
 1680  
 ttagttcacc atattagaga atctattcca ggtgtgagcc tcagcagcga tttcattgct  
 1740  
 ggcttttgtg gtgagacgga ggaagatcac gtccagacag tctctttgct ccgggaagtt  
 1800  
 cagtacaaca tgggcttccct ctttgccctac agcatgagac agaagacacg ggcatatcat  
 1860  
 aggctgaagg atgatgtccc ggaagaggta aaattaaggc gtttggagga actcatcact  
 1920  
 atcttccgag aagaagcaac aaaagccaat cagacctctg tgggctgtac ccagttgggtg  
 1980  
 ctagtgaag ggctcagtaa acgctctgcc actgacctgt gtggcaggaa tgatggaaac  
 2040  
 cttaagggtga tcttccctga tgcagagatg gaggatgtca ataaccctgg gctcagggtc  
 2100  
 agagcccagc ctggggacta tgtgctggtg aagatcacn ntcagccagt tctcagacac  
 2160  
 ttaggggaca tgttctctgc aggaccactc tgagggactc ttctgcatat tgctgacctg  
 2220  
 agaggatggc ctgagagctg acttgggcaa tcttcccaa caggaagggg agacattgcc  
 2280  
 tgccactgag gaaacaggtc atgaaggtgg agataagctg caaggggcca agcaacttta  
 2340  
 tgtcagtga aaacgtgtct ctttaaagct gctatgtgaa cagcttttac agtcattaaa  
 2400  
 ttacctaata ctaagggtta aaaaaaaaaa aaa  
 2433

&lt;210&gt; 5640

&lt;211&gt; 540

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5640

Met	Cys	Pro	Ser	Pro	Glu	Arg	Gln	Glu	Asp	Gly	Ala	Arg	Lys	Asp	Phe
1				5				10						15	
Ser	Ser	Arg	Leu	Ala	Ala	Gly	Pro	Thr	Phe	Gln	His	Phe	Leu	Lys	Ser
			20					25					30		
Ala	Ser	Ala	Pro	Gln	Glu	Lys	Leu	Ser	Ser	Glu	Val	Glu	Asp	Pro	Pro
			35				40					45			
Pro	Tyr	Leu	Met	Met	Asp	Glu	Leu	Leu	Gly	Arg	Gln	Arg	Lys	Val	Tyr
			50			55					60				
Leu	Glu	Thr	Tyr	Gly	Cys	Gln	Met	Asn	Val	Asn	Asp	Thr	Glu	Ile	Ala
			65		70				75					80	
Trp	Ser	Ile	Leu	Gln	Lys	Ser	Gly	Tyr	Leu	Arg	Pro	Val	Thr	Ser	Lys

85 90 95  
 Ala Asp Val Ile Leu Leu Val Thr Cys Ser Ile Arg Glu Lys Ala Glu  
 100 105 110  
 Gln Thr Ile Trp Asn Arg Leu His Gln Leu Lys Ala Leu Lys Thr Arg  
 115 120 125  
 Arg Pro Arg Ser Arg Val Pro Leu Arg Ile Gly Ile Leu Gly Cys Met  
 130 135 140  
 Ala Glu Arg Leu Lys Glu Glu Ile Leu Asn Arg Glu Lys Met Val Asp  
 145 150 155 160  
 Ile Leu Ala Gly Pro Asp Ala Tyr Arg Asp Leu Pro Arg Leu Leu Ala  
 165 170 175  
 Val Ala Glu Ser Gly Gln Gln Ala Ala Asn Val Leu Leu Ser Leu Asp  
 180 185 190  
 Glu Thr Tyr Ala Asp Val Met Pro Val Gln Thr Ser Ala Ser Ala Thr  
 195 200 205  
 Ser Ala Phe Val Ser Ile Met Arg Gly Cys Asp Asn Met Cys Ser Tyr  
 210 215 220  
 Cys Ile Val Pro Phe Thr Arg Gly Arg Glu Arg Ser Arg Pro Ile Ala  
 225 230 235 240  
 Ser Ile Leu Glu Glu Val Lys Lys Leu Ser Glu Gln Gly Leu Lys Glu  
 245 250 255  
 Val Thr Leu Leu Gly Gln Asn Val Asn Ser Phe Arg Asp Asn Ser Glu  
 260 265 270  
 Val Gln Phe Asn Ser Ala Val Pro Thr Asn Leu Ser Arg Gly Phe Thr  
 275 280 285  
 Thr Asn Tyr Lys Thr Lys Gln Gly Gly Leu Arg Phe Ala His Leu Leu  
 290 295 300  
 Asp Gln Val Ser Arg Val Asp Pro Glu Met Arg Ile Arg Phe Thr Ser  
 305 310 315 320  
 Pro His Pro Lys Asp Phe Pro Asp Glu Val Leu Gln Leu Ile His Glu  
 325 330 335  
 Arg Asp Asn Ile Cys Lys Gln Ile His Leu Pro Ala Gln Ser Gly Ser  
 340 345 350  
 Ser Arg Val Leu Glu Ala Met Arg Arg Gly Tyr Ser Arg Glu Ala Tyr  
 355 360 365  
 Val Glu Leu Val His His Ile Arg Glu Ser Ile Pro Gly Val Ser Leu  
 370 375 380  
 Ser Ser Asp Phe Ile Ala Gly Phe Cys Gly Glu Thr Glu Glu Asp His  
 385 390 395 400  
 Val Gln Thr Val Ser Leu Leu Arg Glu Val Gln Tyr Asn Met Gly Phe  
 405 410 415  
 Leu Phe Ala Tyr Ser Met Arg Gln Lys Thr Arg Ala Tyr His Arg Leu  
 420 425 430  
 Lys Asp Asp Val Pro Glu Glu Val Lys Leu Arg Arg Leu Glu Glu Leu  
 435 440 445  
 Ile Thr Ile Phe Arg Glu Glu Ala Thr Lys Ala Asn Gln Thr Ser Val  
 450 455 460  
 Gly Cys Thr Gln Leu Val Leu Val Glu Gly Leu Ser Lys Arg Ser Ala  
 465 470 475 480  
 Thr Asp Leu Cys Gly Arg Asn Asp Gly Asn Leu Lys Val Ile Phe Pro  
 485 490 495  
 Asp Ala Glu Met Glu Asp Val Asn Asn Pro Gly Leu Arg Val Arg Ala  
 500 505 510  
 Gln Pro Gly Asp Tyr Val Leu Val Lys Ile Thr Xaa Gln Pro Val Leu



515 520 525  
 Arg His Leu Gly Asp Met Phe Ser Ala Gly Pro Leu  
 530 535 540

<210> 5641  
 <211> 293  
 <212> DNA  
 <213> Homo sapiens

<400> 5641  
 gcgtcgcata cagccaacct gtgcgtgctg ctgtaccgca gcggcgctcaa agtggtcacc  
 60  
 ttctgtggcc acgcgtccaa aaccaatcag gtcaactcgg gcggtgtgct gctgagggtg  
 120  
 cagggtggcg aggaggtgtg gctggctggg gcacccctgg catccctgga gagccagggtg  
 180  
 aggagggcag atacaagcag aaattccagt cagtgttcac ggtcactcgg cagaccacc  
 240  
 agccccctgc acccaacagc ctgatcagat tcaacgcggg cctcaccaac ccg  
 293

<210> 5642  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 5642  
 Ala Ser His Thr Ala Asn Leu Cys Val Leu Leu Tyr Arg Ser Gly Val  
 1 5 10 15  
 Lys Val Val Thr Phe Cys Gly His Ala Ser Lys Thr Asn Gln Val Asn  
 20 25 30  
 Ser Gly Gly Val Leu Leu Arg Leu Gln Val Gly Glu Glu Val Trp Leu  
 35 40 45  
 Ala Gly Ala Pro Leu Ala Ser Leu Glu Ser Gln Val Arg Arg Ala Asp  
 50 55 60  
 Thr Ser Arg Asn Ser Ser Gln Cys Ser Arg Ser Leu Gly Arg Pro Thr  
 65 70 75 80  
 Ser Pro Leu His Pro Thr Ala  
 85

<210> 5643  
 <211> 1218  
 <212> DNA  
 <213> Homo sapiens

<400> 5643  
 nnacgcgtga ggagcctgag gcggcgccgg ggggtggctcc gcgcgcggtg gtctcggggg  
 60  
 caaaataaca tggcagccag acgaattaca caggagactt ttgatgctgt attacaagaa  
 120  
 aaagccaaac gatatcacat ggatgccagt ggtgaggctg taagcgaaac tcttcagttt  
 180  
 aaagctcaag atctcttaag ggcagtccca agatccagag cagagatgta tgatgacgtc  
 240

cacagcgatg gcagatactc cctcagtga tctgtagctc actctagaga tgccggaaga  
 300  
 gaaggcctga gaagtgcgt atttccaggg ccttccttca gatcaagcaa cccttccatc  
 360  
 agtgatgaca gctactttcg caaagaatgt ggccgggac tggaattttc tcaactctgat  
 420  
 tctcgggacc aggtcattgg ccaccgaaa ttggggcatt tccgtttctca ggactggaaa  
 480  
 tttgcgctcc gtggttcttg ggaacaagac tttggccatc cagttttctca agagtctct  
 540  
 tggtcacagg agtatagttt tgggtccctc gcagttttgg gggactttgg atcttccagg  
 600  
 ctgattgaga aagagtgtt ggagaaggag agtcgggatt atgacgtgga ccacctctggg  
 660  
 gaggctgact ctgtgcttag gggcagcagt caagtccagg ccagaggtcg agctctaaac  
 720  
 atcggtgacc aggaagggtc cctcctagga aagggggaga ctcagggcct gctcacagct  
 780  
 aaggggggtg ttgggaaact tgtcacattg agaaatgtga gcacaaaaaa aatacccacc  
 840  
 gtgaatcgta ttactcccaa aactcagggc actaaccaaa tccagaaaaa cactccaagt  
 900  
 cctgatgtga cctgggggac aaaccaggg acagaagata tccagttccc cattcagaag  
 960  
 atccctctgg ggetggtct gaagaatctt cggctcccca gaagaaagat gagctttgac  
 1020  
 atcatagata agtctgatgt tttttcaaga tttgggatag aaataatcaa atgggcagga  
 1080  
 ttccacacca taaaattaga ttattaaatt tttcccaaac ttttcagac tctctttgaa  
 1140  
 cttgaaacag aaacctgtgc taaaatgctt gcctcattca aatgttcctt aaaaccagag  
 1200  
 cacagagatt ttgcttt  
 1218

&lt;210&gt; 5644

&lt;211&gt; 202

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5644

Trp	Glu	Gln	Asp	Phe	Gly	His	Pro	Val	Ser	Gln	Glu	Ser	Ser	Trp	Ser
1				5					10					15	
Gln	Glu	Tyr	Ser	Phe	Gly	Pro	Ser	Ala	Val	Leu	Gly	Asp	Phe	Gly	Ser
			20					25					30		
Ser	Arg	Leu	Ile	Glu	Lys	Glu	Cys	Leu	Glu	Lys	Glu	Ser	Arg	Asp	Tyr
		35					40					45			
Asp	Val	Asp	His	Pro	Gly	Glu	Ala	Asp	Ser	Val	Leu	Arg	Gly	Ser	Ser
	50					55					60				
Gln	Val	Gln	Ala	Arg	Gly	Arg	Ala	Leu	Asn	Ile	Val	Asp	Gln	Glu	Gly
65					70				75				80		
Ser	Leu	Leu	Gly	Lys	Gly	Glu	Thr	Gln	Gly	Leu	Leu	Thr	Ala	Lys	Gly
			85					90					95		
Gly	Val	Gly	Lys	Leu	Val	Thr	Leu	Arg	Asn	Val	Ser	Thr	Lys	Lys	Ile

```

      100      105      110
Pro Thr Val Asn Arg Ile Thr Pro Lys Thr Gln Gly Thr Asn Gln Ile
      115      120      125
Gln Lys Asn Thr Pro Ser Pro Asp Val Thr Leu Gly Thr Asn Pro Gly
      130      135      140
Thr Glu Asp Ile Gln Phe Pro Ile Gln Lys Ile Pro Leu Gly Leu Asp
145      150      155      160
Leu Lys Asn Leu Arg Leu Pro Arg Arg Lys Met Ser Phe Asp Ile Ile
      165      170      175
Asp Lys Ser Asp Val Phe Ser Arg Phe Gly Ile Glu Ile Ile Lys Trp
      180      185      190
Ala Gly Phe His Thr Ile Lys Leu Asp Tyr
      195      200

```

&lt;210&gt; 5645

&lt;211&gt; 156

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5645

```

ccacgtccat cccgaagaag gaactgcagg tgggcgggttt ttggcctggc acagagatgt
60
cctcagatca gttccccctc tcccaggcaa gaggacacga gcactggcaa gttcacctgc
120
aaagtccccg gcctctacta ctttgtctac cagcgc
156

```

&lt;210&gt; 5646

&lt;211&gt; 52

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5646

```

Pro Arg Pro Ser Arg Arg Asn Cys Arg Trp Ala Val Phe Gly Leu
1      5      10      15
Ala Gln Arg Cys Pro Gln Ile Ser Phe Pro Ser Pro Arg Gln Glu Asp
      20      25      30
Thr Ser Thr Gly Lys Phe Thr Cys Lys Val Pro Gly Leu Tyr Tyr Phe
      35      40      45
Val Tyr His Ala
50

```

&lt;210&gt; 5647

&lt;211&gt; 150

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5647

```

cccatggggc cgggcaccct ggcattccca gggggtccca tggggccatt tttcccagga
60
aggcccaagg gggagccagg aatcccagcc attcccggga tccgaggacc caaagggcag
120
aagggagaac ccggcttacc cggccatccn
150

```

<210> 5648  
 <211> 50  
 <212> PRT  
 <213> Homo sapiens

<400> 5648  
 Pro Met Gly Pro Gly Thr Leu Ala Phe Pro Gly Gly Pro Met Gly Pro  
 1 5 10 15  
 Phe Phe Pro Gly Arg Pro Lys Gly Glu Pro Gly Ile Pro Ala Ile Pro  
 20 25 30  
 Gly Ile Arg Gly Pro Lys Gly Gln Lys Gly Glu Pro Gly Leu Pro Gly  
 35 40 45  
 His Pro  
 50

<210> 5649  
 <211> 345  
 <212> DNA  
 <213> Homo sapiens

<400> 5649  
 nngggacctgc aagcccgcg ccagacctgc cagcgcgccg gccatggctg tcgccgcgc  
 60  
 aaccgcctgg tccctcggat cgcgcccagc ccagactcgg actcggacac agactcggag  
 120  
 gacccgagtc tccggcgag cgcggggcggc ttgctccgct cgcaggtcat ccacagcggg  
 180  
 cacttcattg tgcgtcgcc gcacagcgac tcgctgcccc ggcggcgcca ccaggagggt  
 240  
 ccgtggggcc ctccgacttc gggcgcgcca gtatcgaccc cacactcaca cgctctctcg  
 300  
 agtgcttgag cctggcctac agtggcaagc tggggctctcc caagt  
 345

<210> 5650  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 5650  
 Met Ala Val Ala Ala Ala Thr Ala Trp Ser Leu Gly Ser Arg Pro Ala  
 1 5 10 15  
 Gln Thr Arg Thr Arg Thr Gln Thr Arg Arg Thr Arg Val Ser Gly Ala  
 20 25 30  
 Ala Arg Ala Ala Cys Ser Ala Arg Arg Ser Ser Thr Ala Val Thr Ser  
 35 40 45  
 Trp Cys Arg Arg Arg Thr Ala Thr Arg Cys Pro Gly Gly Ala Thr Arg  
 50 55 60  
 Arg Val Arg Gly Ala Leu Arg Leu Arg Ala Ala Gln Tyr Arg Pro His  
 65 70 75 80  
 Thr His Thr Pro Leu Arg Val Leu Glu Pro Gly Leu Gln Trp Gln Ala  
 85 90 95  
 Gly Val Ser Gln

100

&lt;210&gt; 5651

&lt;211&gt; 615

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5651

ctcgaggaat attgggtctt ctgcgcggcc gtagagctcc gccaaagtgc cctgcgcgga  
60  
ggagaagtgg cgtcagatcc ggccgggcag tagaggaaat tgcggtagt accctcgggc  
120  
ctcgccatga agagccgctt tagcaccatt gacctccgcg ccgtactcgc ggagctgaat  
180  
gctagcttgc taggaatgag agtaacaat gtttatgatg tggataataa gacatacctt  
240  
attcgtcttc aaaaaccgga ctttaaagct acacttttac ttgaatctgg catacaaatt  
300  
catacaacag aatttgagtg gcctaagaat atgatgccgt ctagttttgc catgaagtgc  
360  
cgaaaacatt tgaagatcg gagattagtc agtgcaaac agcttggtgt ggatagaatt  
420  
gtagattttc aatttggaag tgatgaagct gcttaccatt taatcattga gctctatgat  
480  
agggggaaca ttgttcttac agattatgag tacgtaattt taaatattct aaggtttcga  
540  
actgatgagg cagatgatgt taaatttgct gttcgtgaac gctatccact tgatcatgct  
600  
agagctgctg aacct  
615

&lt;210&gt; 5652

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5652

Met	Lys	Ser	Arg	Phe	Ser	Thr	Ile	Asp	Leu	Arg	Ala	Val	Leu	Ala	Glu
1				5					10					15	
Leu	Asn	Ala	Ser	Leu	Leu	Gly	Met	Arg	Val	Asn	Asn	Val	Tyr	Asp	Val
		20						25					30		
Asp	Asn	Lys	Thr	Tyr	Leu	Ile	Arg	Leu	Gln	Lys	Pro	Asp	Phe	Lys	Ala
		35					40					45			
Thr	Leu	Leu	Leu	Glu	Ser	Gly	Ile	Gln	Ile	His	Thr	Thr	Glu	Phe	Glu
	50					55					60				
Trp	Pro	Lys	Asn	Met	Met	Pro	Ser	Ser	Phe	Ala	Met	Lys	Cys	Arg	Lys
65				70					75					80	
His	Leu	Lys	Ser	Arg	Arg	Leu	Val	Ser	Ala	Lys	Gln	Leu	Gly	Val	Asp
			85					90					95		
Arg	Ile	Val	Asp	Phe	Gln	Phe	Gly	Ser	Asp	Glu	Ala	Ala	Tyr	His	Leu
		100					105						110		
Ile	Ile	Glu	Leu	Tyr	Asp	Arg	Gly	Asn	Ile	Val	Leu	Thr	Asp	Tyr	Glu
	115					120					125				
Tyr	Val	Ile	Leu	Asn	Ile	Leu	Arg	Phe	Arg	Thr	Asp	Glu	Ala	Asp	Asp

130	135	140
Val Lys Phe Ala Val Arg Glu Arg Tyr Pro Leu Asp His Ala Arg Ala		
145	150	155
Ala Glu Pro		160

&lt;210&gt; 5653

&lt;211&gt; 1439

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5653

```

nnacgcgtcg catacagcca acctgtgctg gctgctgtac cgcagcggcg tcaaagtggg
60
caccttctgt ggccacacgt ccaaaaccaa tcaggtcaac tcgggcgggtg tgctgctgag
120
gttgaggtg aacttgccag tgctcgtgtc ataatctccc tgcgggttg tgaggaccgc
180
gttgaatctg atcaggctgt tgggtgcagg gggctggtgg gtctgccgag tgaccactca
240
gacaccgtgt cctcttgccct gggagagggg aagcagatct gaggacatct ctgtgccagg
300
ccagaaaccg cccacctgca ggtgaggccc ggaccctgc ccagttcctt ctccgggatg
360
gacgtggggc ccagctccct gcccacctt gggctgaagc tgctgctgct cctgctgctg
420
ctgcccctca ggggccaagc caacacaggc tgctacggga tcccagggat gcccggcctg
480
cccggggcac cagggaagga tgggtacgac ggactgccgg ggcccaaggg ggagccagga
540
atcccagcca ttcccggtat ccgaggacct aaagggcaga agggagaacc cggcttacct
600
ggccatctct ggaaaaatgg ccccatggga cccctggga tgccaggggt gcccgcccc
660
atgggcatcc ctggagagcc aggtgaggag ggcagataca agcagaaatt ccagtcagtg
720
ttcacggtca ctcggcagac ccaccagccc cctgcacca acagcctgat cagattcaac
780
gcggctctca ccaaccgcga gggagattat gacacgagca ctggcaagtt cacctgcaaa
840
gtccccggcc tctactactt tgtctaccac gcgtcgcata cagccaacct gtgctgctg
900
ctgtaccgca gggcggtcaa agtggtcacc ttctgtggcc acacgtccaa aaccaatcag
960
gtcaactcgg gcggtgtgct gctgaggttg cagggtggcg aggaggtgtg gctggctgtc
1020
aatgactact acgacatggg gggcatccag ggctctgaca gcgtcttctc cggttctctg
1080
cttttccccg actagggcgg gcagatgcgc tcgagcccca cgggccttcc acctccctca
1140
gcttctctga tggaccacc ttactggcca gtctgcatcc ttgcctagac cattctcccc
1200
accagatgga cttctcctcc agggagccca cctgaccca ccccaactgc accccctccc
1260

```

catgggttct ctcttctctc tgaacttctt taggagtcac tgcttggtg gttcttgga  
 1320  
 cacttaacca atgccttctg gtactgccat tctttttttt ttttttcaag tattggaagg  
 1380  
 ggtggggaga tatataaata aatcatgaaa tcaataaaaa aaaaaaaaaa aaaaaaaaaa  
 1439

<210> 5654

<211> 245

<212> PRT

<213> Homo sapiens

<400> 5654

Met	Asp	Val	Gly	Pro	Ser	Ser	Leu	Pro	His	Leu	Gly	Leu	Lys	Leu	Leu
1				5					10					15	
Leu	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Arg	Gly	Gln	Ala	Asn	Thr	Gly	Cys
		20					25						30		
Tyr	Gly	Ile	Pro	Gly	Met	Pro	Gly	Leu	Pro	Gly	Ala	Pro	Gly	Lys	Asp
		35					40						45		
Gly	Tyr	Asp	Gly	Leu	Pro	Gly	Pro	Lys	Gly	Glu	Pro	Gly	Ile	Pro	Ala
	50					55				60					
Ile	Pro	Gly	Ile	Arg	Gly	Pro	Lys	Gly	Gln	Lys	Gly	Glu	Pro	Gly	Leu
65				70					75					80	
Pro	Gly	His	Pro	Gly	Lys	Asn	Gly	Pro	Met	Gly	Pro	Pro	Gly	Met	Pro
			85					90						95	
Gly	Val	Pro	Gly	Pro	Met	Gly	Ile	Pro	Gly	Glu	Pro	Gly	Glu	Glu	Gly
		100						105					110		
Arg	Tyr	Lys	Gln	Lys	Phe	Gln	Ser	Val	Phe	Thr	Val	Thr	Arg	Gln	Thr
		115					120					125			
His	Gln	Pro	Pro	Ala	Pro	Asn	Ser	Leu	Ile	Arg	Phe	Asn	Ala	Val	Leu
		130				135					140				
Thr	Asn	Pro	Gln	Gly	Asp	Tyr	Asp	Thr	Ser	Thr	Gly	Lys	Phe	Thr	Cys
145				150						155				160	
Lys	Val	Pro	Gly	Leu	Tyr	Tyr	Phe	Val	Tyr	His	Ala	Ser	His	Thr	Ala
			165					170						175	
Asn	Leu	Cys	Val	Leu	Leu	Tyr	Arg	Ser	Gly	Val	Lys	Val	Val	Thr	Phe
		180						185					190		
Cys	Gly	His	Thr	Ser	Lys	Thr	Asn	Gln	Val	Asn	Ser	Gly	Gly	Val	Leu
		195					200					205			
Leu	Arg	Leu	Gln	Val	Gly	Glu	Glu	Val	Trp	Leu	Ala	Val	Asn	Asp	Tyr
	210					215					220				
Tyr	Asp	Met	Val	Gly	Ile	Gln	Gly	Ser	Asp	Ser	Val	Phe	Ser	Gly	Phe
225					230					235					240
Leu	Leu	Phe	Pro	Asp											
				245											

<210> 5655

<211> 3810

<212> DNA

<213> Homo sapiens

<400> 5655

gatctgttgg aggaggatga gctgctagag cagaagtttc aggaggcggg gggccaggca  
 60

gggnngccat ctccatcanc ctccaaggct gagctggcag aggtgaggcg agaatgggcc  
120  
aagtacatgg aagtccatga gaaggcctcc ttcaccaata gtgagctgca ccgtgccatg  
180  
aacctgcacg tcggcaacct gcgcctgctc agcggggccgc ttgaccaggt ccgggctgcc  
240  
ctgcccacac cggccctctc cccagaggac aaggccgtgc tgcaaacct aaagcgcac  
300  
ctggctaagg tgcaggagat gcgggaccag cgcgtgtccc tggagcagca gctgctgag  
360  
cttatccaga aagatgacat cactgcctcg ctggtcacca cagaccactc agagatgaag  
420  
aagttgttcg aggagcagct gaaaaagtat gaccagctga aggtgtacct ggagcagaac  
480  
ctggccgccc aggaccgtgt cctctgtgca ctgacagagg ccaacgtgca gtacgcagcc  
540  
gtgcggcggg tactcagcga cttggaccaa aagtggaact ccacgtgca gaccctggtg  
600  
gctcgtatg aagcctatga ggacctgatg aagaagtcgc aggagggcag ggacttctac  
660  
gcagatctgg agagcaaggt ggctgctctg ctggagcgca cgcagtccac ctgccaggcc  
720  
cgcgaggctg cccgccagca gctcctggac agggagctga agaagaagcc gccgccacgg  
780  
cccacagccc caaagccgct gctgccccgc agggaggaga gtgaggcagt ggaagcagga  
840  
gacccccctg aggagctgcg cagcctcccc cctgacatgg tggttgccc acgactgcct  
900  
gacaccttc tgggaagtgc caccgcctc cactttctc ccagccctt cccagctcc  
960  
acaggcccag gaccccacta tctctcaggc cccttgccc ctggtacctc ctggggccc  
1020  
accagctga tacagcccag ggccccagg cccatgcaa tgcccgtagc acctgggcct  
1080  
gcctctacc cagccctgc ctacacaccg gagctgggccc ttgtgcccc atcctcccca  
1140  
cagcatggcg tggtagcag tccctatgtg gggtagggc cgccccacc agttgcaggt  
1200  
ctccctcgg cccacctcc tcaattctca ggccccaggt tggccatggc ggttcggcca  
1260  
gccaccacca cagtagatag catccaggcg cccatcccca gccacacagc cccacggcca  
1320  
aacccccccc ctgctcctcc cccgcctgc ttccctgtgc cccacccga gccactgccc  
1380  
agccttaca cctaccctgc aggggctaag caaccatcc cagcacagca ccacttctct  
1440  
tctgggatcc ccacaggtt tccagcccca aggattgggc ccagcccca gccccatcct  
1500  
cagccccatc cttcacaage gtttgggcct cagccccac agcagccct tccactccag  
1560  
catccacatc ttttcccacc ccaggcccca ggactcctac cccacaatc ccctacccc  
1620  
tatgcccctc agcctggggt cctggggcag ccgccacccc cctacacac ccagctctac  
1680



ccaggteccg ctcaagaccc tctgccagcc cactcagggg ctctgccttt cccagaccct  
1740  
gggccccctc agcctcccca tccccactg gcatatggtc ctgccccctc taccagaccc  
1800  
atggggcccc aggagcccc tcttaccatt cgagggccct cgtctgctgg ccagtcaccc  
1860  
cctagtcccc acctggtgcc ttcacctgcc ccatctccag ggcttggtcc ggtacccccct  
1920  
cgccccccag cagcagaacc acccccttgc ctgcgccgag gcgccgcagc tgcagacctg  
1980  
ctctcctcca gcccggagag ccagcatggc ggcactcagt ctctggggg tgggcagccc  
2040  
ctgctgcagc ccaccaaggt ggatgcagct gagggctcgt gccgcaggc cctgcggctg  
2100  
attgagcggg acccctatga gcatcctgag aggtgcggc agttgcagca ggagctggag  
2160  
gcctttcggg gtcagctggg ggatgtggga gctctggaca ctgtctggcg agagctgcaa  
2220  
gatgcgcagg aacatgatgc ccgaggccgt tccatcgcca ttgcccgctg ctactcactg  
2280  
aagaaccggc accaggatgt catgccctat gacagtaacc gtgtggtgct gcgctcaggc  
2340  
aaggatgact acatcaatgc cagctgcgtg gaggggctct cccatactg cccccgcta  
2400  
gtggcaaccc agggccccact gcttggcaca gctgctgact tctggctcat ggtccatgag  
2460  
cagaaagtgt cagtcattgt catgctggtt tctgaggctg agatggagaa gcaaaaagt  
2520  
gcacgctact tccccaccga gaggggccag cccatggtgc acggtgcct gagectggca  
2580  
ttgagcagc tccgcagcac cgaaacccat gtggagcgcg tgcagacct gcagttccga  
2640  
gaccagagcc tcaagcgtc tcttgtgac ctgcacttcc ccacttggcc tgagttaggc  
2700  
ctgcccagaca gcccagcaa cttctgcgc ttcacccagg aggtgcacgc acattacctg  
2760  
catcagcggc cgtgcacac gccatcatt gtgcactgca gctctggtgt gggccgcagc  
2820  
ggagcctttg cactgctcta tgcagctgtg caggagggtg aggtgggaa cggaatccct  
2880  
gagctgcctc agctggtgcg gcgcatgcgg cagcagagaa agcacatgct gcaggagaag  
2940  
ctgcacctca ggncttctgt atgaggcagt ggtgagacac gtggagcagg tcttgcagcg  
3000  
ccatggtgtg cctcctccat gcaaaccctt ggccagtga agcatcagcc agaagaacca  
3060  
ccttctcag gactcccagg acctggtcct cgggtgggat gtgcccata gctccatcca  
3120  
ggccaccatt gccaaagctc gattcggcct cctggggggt tggagtcccc ggttgccagc  
3180  
ttgccaggcc ctgcagagcc ccagggctc ccgccagcca gcctcccaga gtctacccca  
3240  
atcccatctt cctccccacc cccctttcc tccccactac ctgaggctcc ccagcctaag  
3300

gaggagccgc cagtgcctga agccccccagc tcggggccccc cctcctcctc cctggaattg  
 3360  
 ctggcctcct tgacccccaga ggccttctcc ctggacagct cctgcgggg caaacagcgg  
 3420  
 atgagcaagc ataaactttct gcaggcccat aacgggcaag ggctgcgggc caccggcccc  
 3480  
 tctgacgacc cctcagcct tctggatcca ctctggacac tcaacaagac ctgaacaggt  
 3540  
 tttgcctacc tggctcctac actacatcat catcatctca tgcccacctg cccacaccca  
 3600  
 gcagagcttc tcagtgggca cagtctctta ctcccatttc tgetgccttt ggccctgcct  
 3660  
 ggcccagcct gcacccctgt ggggtggaaa tgtactgcag gctctgggtc aggttctgct  
 3720  
 cctttatggg acccgacatt tttagctct ttgctattga aataataaac caccctgttc  
 3780  
 tgtggcccg taaaaaaaaa aaaaaaaaaa  
 3810

&lt;210&gt; 5656

&lt;211&gt; 987

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5656

Asp	Leu	Leu	Glu	Glu	Asp	Glu	Leu	Leu	Glu	Gln	Lys	Phe	Gln	Glu	Ala
1			5						10					15	
Val	Gly	Gln	Ala	Gly	Xaa	Pro	Ser	Pro	Ser	Xaa	Ser	Lys	Ala	Glu	Leu
			20					25					30		
Ala	Glu	Val	Arg	Arg	Glu	Trp	Ala	Lys	Tyr	Met	Glu	Val	His	Glu	Lys
		35					40					45			
Ala	Ser	Phe	Thr	Asn	Ser	Glu	Leu	His	Arg	Ala	Met	Asn	Leu	His	Val
	50				55					60					
Gly	Asn	Leu	Arg	Leu	Leu	Ser	Gly	Pro	Leu	Asp	Gln	Val	Arg	Ala	Ala
65				70					75					80	
Leu	Pro	Thr	Pro	Ala	Leu	Ser	Pro	Glu	Asp	Lys	Ala	Val	Leu	Gln	Asn
			85					90					95		
Leu	Lys	Arg	Ile	Leu	Ala	Lys	Val	Gln	Glu	Met	Arg	Asp	Gln	Arg	Val
		100					105					110			
Ser	Leu	Glu	Gln	Gln	Leu	Arg	Glu	Leu	Ile	Gln	Lys	Asp	Asp	Ile	Thr
	115				120						125				
Ala	Ser	Leu	Val	Thr	Thr	Asp	His	Ser	Glu	Met	Lys	Lys	Leu	Phe	Glu
	130				135					140					
Glu	Gln	Leu	Lys	Lys	Tyr	Asp	Gln	Leu	Lys	Val	Tyr	Leu	Glu	Gln	Asn
145				150					155					160	
Leu	Ala	Ala	Gln	Asp	Arg	Val	Leu	Cys	Ala	Leu	Thr	Glu	Ala	Asn	Val
		165						170					175		
Gln	Tyr	Ala	Ala	Val	Arg	Arg	Val	Leu	Ser	Asp	Leu	Asp	Gln	Lys	Trp
	180						185					190			
Asn	Ser	Thr	Leu	Gln	Thr	Leu	Val	Ala	Ser	Tyr	Glu	Ala	Tyr	Glu	Asp
	195					200					205				
Leu	Met	Lys	Lys	Ser	Gln	Glu	Gly	Arg	Asp	Phe	Tyr	Ala	Asp	Leu	Glu
	210				215					220					
Ser	Lys	Val	Ala	Ala	Leu	Leu	Glu	Arg	Thr	Gln	Ser	Thr	Cys	Gln	Ala

225 230 235 240  
 Arg Glu Ala Ala Arg Gln Gln Leu Leu Asp Arg Glu Leu Lys Lys Lys  
 245 250 255  
 Pro Pro Pro Arg Pro Thr Ala Pro Lys Pro Leu Leu Pro Arg Arg Glu  
 260 265 270  
 Glu Ser Glu Ala Val Glu Ala Gly Asp Pro Pro Glu Glu Leu Arg Ser  
 275 280 285  
 Leu Pro Pro Asp Met Val Ala Gly Pro Arg Leu Pro Asp Thr Phe Leu  
 290 295 300  
 Gly Ser Ala Thr Pro Leu His Phe Pro Pro Ser Pro Phe Pro Ser Ser  
 305 310 315 320  
 Thr Gly Pro Gly Pro His Tyr Leu Ser Gly Pro Leu Pro Pro Gly Thr  
 325 330 335  
 Tyr Ser Gly Pro Thr Gln Leu Ile Gln Pro Arg Ala Pro Gly Pro His  
 340 345 350  
 Ala Met Pro Val Ala Pro Gly Pro Ala Leu Tyr Pro Ala Pro Ala Tyr  
 355 360 365  
 Thr Pro Glu Leu Gly Leu Val Pro Arg Ser Ser Pro Gln His Gly Val  
 370 375 380  
 Val Ser Ser Pro Tyr Val Gly Val Gly Pro Ala Pro Pro Val Ala Gly  
 385 390 395 400  
 Leu Pro Ser Ala Pro Pro Pro Gln Phe Ser Gly Pro Glu Leu Ala Met  
 405 410 415  
 Ala Val Arg Pro Ala Thr Thr Thr Val Asp Ser Ile Gln Ala Pro Ile  
 420 425 430  
 Pro Ser His Thr Ala Pro Arg Pro Asn Pro Thr Pro Ala Pro Pro Pro  
 435 440 445  
 Pro Cys Phe Pro Val Pro Pro Pro Gln Pro Leu Pro Thr Pro Tyr Thr  
 450 455 460  
 Tyr Pro Ala Gly Ala Lys Gln Pro Ile Pro Ala Gln His His Phe Ser  
 465 470 475 480  
 Ser Gly Ile Pro Thr Gly Phe Pro Ala Pro Arg Ile Gly Pro Gln Pro  
 485 490 495  
 Gln Pro His Pro Gln Pro His Pro Ser Gln Ala Phe Gly Pro Gln Pro  
 500 505 510  
 Pro Gln Gln Pro Leu Pro Leu Gln His Pro His Leu Phe Pro Pro Gln  
 515 520 525  
 Ala Pro Gly Leu Leu Pro Pro Gln Ser Pro Tyr Pro Tyr Ala Pro Gln  
 530 535 540  
 Pro Gly Val Leu Gly Gln Pro Pro Pro Pro Leu His Thr Gln Leu Tyr  
 545 550 555 560  
 Pro Gly Pro Ala Gln Asp Pro Leu Pro Ala His Ser Gly Ala Leu Pro  
 565 570 575  
 Phe Pro Ser Pro Gly Pro Pro Gln Pro Pro His Pro Pro Leu Ala Tyr  
 580 585 590  
 Gly Pro Ala Pro Ser Thr Arg Pro Met Gly Pro Gln Ala Ala Pro Leu  
 595 600 605  
 Thr Ile Arg Gly Pro Ser Ser Ala Gly Gln Ser Thr Pro Ser Pro His  
 610 615 620  
 Leu Val Pro Ser Pro Ala Pro Ser Pro Gly Pro Gly Pro Val Pro Pro  
 625 630 635 640  
 Arg Pro Pro Ala Ala Glu Pro Pro Pro Cys Leu Arg Arg Gly Ala Ala  
 645 650 655  
 Ala Ala Asp Leu Leu Ser Ser Ser Pro Glu Ser Gln His Gly Gly Thr

660										665										670																												
Gln	Ser	Pro	Gly	Gly	Gly	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp	Gln	Ser	Pro	Gly	Gly	Gly	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp	Gln	Ser	Pro	Gly	Gly	Gly	Gln	Pro	Leu	Leu	Gln	Pro	Thr	Lys	Val	Asp	
			675					680					685																																			
Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp	Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp	Ala	Ala	Glu	Gly	Arg	Arg	Pro	Gln	Ala	Leu	Arg	Leu	Ile	Glu	Arg	Asp	
			690				695					700																																				
Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Gln	Glu	Leu	Glu	Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Gln	Glu	Leu	Glu	Pro	Tyr	Glu	His	Pro	Glu	Arg	Leu	Arg	Gln	Leu	Gln	Gln	Glu	Leu	Glu	
705					710					715					720																																	
Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp	Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp	Ala	Phe	Arg	Gly	Gln	Leu	Gly	Asp	Val	Gly	Ala	Leu	Asp	Thr	Val	Trp	
			725						730					735																																		
Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile	Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile	Arg	Glu	Leu	Gln	Asp	Ala	Gln	Glu	His	Asp	Ala	Arg	Gly	Arg	Ser	Ile	
			740					745					750																																			
Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met	Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met	Ala	Ile	Ala	Arg	Cys	Tyr	Ser	Leu	Lys	Asn	Arg	His	Gln	Asp	Val	Met	
			755				760					765																																				
Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr	Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr	Pro	Tyr	Asp	Ser	Asn	Arg	Val	Val	Leu	Arg	Ser	Gly	Lys	Asp	Asp	Tyr	
			770			775					780																																					
Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu	Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu	Ile	Asn	Ala	Ser	Cys	Val	Glu	Gly	Leu	Ser	Pro	Tyr	Cys	Pro	Pro	Leu	
7																																																

<210> 5657

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 5657

<400> 3637  
 tgcggacagt tgaagaagcg accgaggac tgggagtcgt tagtgaggat gacgcggcat  
 60

80  
ggcaagaact gcaccgcagg cgccgtctac acctaccacg agaagaagaa ggacacagcg  
120

120  
gcttcgggct atgggaccca gaacattcga ctgagccggg atgccgtgaa ggacttcgac  
180

tgctgtgtgc tctccctgca gccttgccac gatcctgttg tcaccccaga tggctacctg  
 240  
 tatgagcgtg aggccatcct ggagtacatt ctgcaccaga agaaggagat tgcccggcag  
 300  
 atgaaggcct acgagaagca gcggggcacc cggcgcgagg agcagaagga gcttcagcgg  
 360  
 gcggcctcgc aggaccatgt gcggggcttc ctggagaagg agtcggctat cgtgagccgg  
 420  
 cccctcaacc ctttcacagc caaggccctc tcgggcacca gccagatga tgtccaacct  
 480  
 gggcccagtg tgggtcctcc aagtaaggac aaggacaaag tgetgcccag cttctggatc  
 540  
 ccgtcgtgta cgcctgaagc caaggccacc aagctggaga agccgtcccg cacggtgacc  
 600  
 tgccccatgt cagggaagcc cctgcgcatg tcggacctga cgcctgtgca cttcacaccg  
 660  
 ctagacagct ccgtggaccg cgtggggctc atcaccgcga gcgagcgcta cgtgtgtgcc  
 720  
 gtgaccgcg acagcctgag caacgccacc cctgcgctg tgetgcggcc ctctggggct  
 780  
 gtggtcacc tcgaatgcgt ggagaagctg attcggagg acatggtgga ccctgtgact  
 840  
 ggagacaaac tcacagaccg cgacatcatt gtgctgcagc ggggcggtag cggcttcgcg  
 900  
 ggctccggag tgaagctgca agcggagaaa tcacggccgg tgatgcaggc ctgagtgtgt  
 960  
 gcggggagacc aaataaaccg gcttgggtgc gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1020

&lt;210&gt; 5658

&lt;211&gt; 301

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5658

Met	Thr	Arg	His	Gly	Lys	Asn	Cys	Thr	Ala	Gly	Ala	Val	Tyr	Thr	Tyr
1				5					10					15	
His	Glu	Lys	Lys	Lys	Asp	Thr	Ala	Ala	Ser	Gly	Tyr	Gly	Thr	Gln	Asn
			20					25					30		
Ile	Arg	Leu	Ser	Arg	Asp	Ala	Val	Lys	Asp	Phe	Asp	Cys	Cys	Cys	Leu
		35					40					45			
Ser	Leu	Gln	Pro	Cys	His	Asp	Pro	Val	Val	Thr	Pro	Asp	Gly	Tyr	Leu
	50					55					60				
Tyr	Glu	Arg	Glu	Ala	Ile	Leu	Glu	Tyr	Ile	Leu	His	Gln	Lys	Lys	Glu
65					70					75				80	
Ile	Ala	Arg	Gln	Met	Lys	Ala	Tyr	Glu	Lys	Gln	Arg	Gly	Thr	Arg	Arg
			85					90					95		
Glu	Glu	Gln	Lys	Glu	Leu	Gln	Arg	Ala	Ala	Ser	Gln	Asp	His	Val	Arg
			100					105					110		
Gly	Phe	Leu	Glu	Lys	Glu	Ser	Ala	Ile	Val	Ser	Arg	Pro	Leu	Asn	Pro
		115					120					125			
Phe	Thr	Ala	Lys	Ala	Leu	Ser	Gly	Thr	Ser	Pro	Asp	Val	Gln	Pro	
	130					135					140				
Gly	Pro	Ser	Val	Gly	Pro	Pro	Ser	Lys	Asp	Lys	Asp	Lys	Val	Leu	Pro

145		150		155		160
Ser Phe Trp Ile Pro Ser Leu Thr Pro Glu Ala Lys Ala Thr Lys Leu						
	165		170		175	
Glu Lys Pro Ser Arg Thr Val Thr Cys Pro Met Ser Gly Lys Pro Leu						
	180		185		190	
Arg Met Ser Asp Leu Thr Pro Val His Phe Thr Pro Leu Asp Ser Ser						
	195		200		205	
Val Asp Arg Val Gly Leu Ile Thr Arg Ser Glu Arg Tyr Val Cys Ala						
	210		215		220	
Val Thr Arg Asp Ser Leu Ser Asn Ala Thr Pro Cys Ala Val Leu Arg						
	225		230		235	
Pro Ser Gly Ala Val Val Thr Leu Glu Cys Val Glu Lys Leu Ile Arg						
	245		250		255	
Lys Asp Met Val Asp Pro Val Thr Gly Asp Lys Leu Thr Asp Arg Asp						
	260		265		270	
Ile Ile Val Leu Gln Arg Gly Gly Thr Gly Phe Ala Gly Ser Gly Val						
	275		280		285	
Lys Leu Gln Ala Glu Lys Ser Arg Pro Val Met Gln Ala						
	290		295		300	

&lt;210&gt; 5659

&lt;211&gt; 1263

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5659

```

nttttaaaac gtaattatatt aattctgaga ctctgggaga gggggccttag atctctgctt
60
tgggtgttct tctcagatgc ggtgctttta aaaaaaagtg taattattta atcctgagac
120
tcagagaagg cttagatcta tgcattgggt gttattctca gatgcagaga tgtaaatgcc
180
atcttctct tctgttttca ggtcacatgt gccaatttaa cgaacgggtg aaagtcagaa
240
cttctgaaat caggaagcag caaatccaca cttaaagcaca tatggacaga aagcagcaaa
300
gacttgtcta tcagccgact cctgtcacag acttttcgtg gcaaagagaa tgatacagat
360
ttggacctga gatatgacac cccagaacct tattctgagc aagacctctg ggactggctg
420
aggaactcca cagaccttca agagcctcgg ccaggggcca agagaaggcc cattgttaaa
480
acgggcaagt ttaagaaaat gtttggatgg ggcgattttc attccaacat caaaacagtg
540
aagctgaacc tggtgataac tgggaaaatt gtagatcatg gcaatgggac atttagtggt
600
tatttcaggc ataattcaac tgggtcaagg aatgtatctg tcagcttggt accccctaca
660
aaaatcgtgg aatttgactt ggcacaacaa accgtgattg atgccaaaga ttccaagtct
720
tttaattgtc gcattgaata tgaaaagggt gacaaggcta ccaagaacac actctgcaac
780
tatgaccctt caaaaacctg ttaccaggag caaaccctaa gtcattgtatc ctggctctgc
840

```

tccaagccct ttaaggtgat ctgtatttac atttcctttt atagtacaga ttataaactg  
 900  
 gtacagaaag tgtgcctga ctacaactac cacagtgaaca caccttactt tcctcggga  
 960  
 tgaaggtgaa catgggggtg agactgaagc ctgaggaatt aaaggtcata tgacagggct  
 1020  
 gttacctcaa agaagaaggt cacatctgtt gcctggaatg tgtctacact gctgctcttg  
 1080  
 tcaactggct gcaaaatata ctagtggaaa acactctgat gtaatttctg ccagtcagc  
 1140  
 ttcacccctc agtataattg taaatcatca cagattttga attcacacct gaagacatgc  
 1200  
 tctcacatat agaggtacac aaacacaccg tcatgcacat ttcagcttgc gtctatcatg  
 1260  
 att  
 1263

&lt;210&gt; 5660

&lt;211&gt; 253

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5660

Val Thr Cys Ala Asn Leu Thr Asn Gly Gly Lys Ser Glu Leu Leu Lys  
 1 5 10 15  
 Ser Gly Ser Ser Lys Ser Thr Leu Lys His Ile Trp Thr Glu Ser Ser  
 20 25 30  
 Lys Asp Leu Ser Ile Ser Arg Leu Leu Ser Gln Thr Phe Arg Gly Lys  
 35 40 45  
 Glu Asn Asp Thr Asp Leu Asp Leu Arg Tyr Asp Thr Pro Glu Pro Tyr  
 50 55 60  
 Ser Glu Gln Asp Leu Trp Asp Trp Leu Arg Asn Ser Thr Asp Leu Gln  
 65 70 75 80  
 Glu Pro Arg Pro Arg Ala Lys Arg Arg Pro Ile Val Lys Thr Gly Lys  
 85 90 95  
 Phe Lys Lys Met Phe Gly Trp Gly Asp Phe His Ser Asn Ile Lys Thr  
 100 105 110  
 Val Lys Leu Asn Leu Leu Ile Thr Gly Lys Ile Val Asp His Gly Asn  
 115 120 125  
 Gly Thr Phe Ser Val Tyr Phe Arg His Asn Ser Thr Gly Gln Gly Asn  
 130 135 140  
 Val Ser Val Ser Leu Val Pro Pro Thr Lys Ile Val Glu Phe Asp Leu  
 145 150 155 160  
 Ala Gln Gln Thr Val Ile Asp Ala Lys Asp Ser Lys Ser Phe Asn Cys  
 165 170 175  
 Arg Ile Glu Tyr Glu Lys Val Asp Lys Ala Thr Lys Asn Thr Leu Cys  
 180 185 190  
 Asn Tyr Asp Pro Ser Lys Thr Cys Tyr Gln Glu Gln Thr Gln Ser His  
 195 200 205  
 Val Ser Trp Leu Cys Ser Lys Pro Phe Lys Val Ile Cys Ile Tyr Ile  
 210 215 220  
 Ser Phe Tyr Ser Thr Asp Tyr Lys Leu Val Gln Lys Val Cys Pro Asp  
 225 230 235 240  
 Tyr Asn Tyr His Ser Asp Thr Pro Tyr Phe Pro Ser Gly

245

250

&lt;210&gt; 5661

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5661

agagctcgaa ggggccatat gacactctc ccggaccctt ggacacacac agccctgggg

60

actggatgcc ttggagcatg caagtccaga gcaccctggg agccctggtg catgggaccc

120

ataaccagtg gcacggcaag gaccagcag gaagcaccag ccactggccc cgacctcccc

180

caccaggac ctgacgggca cttagacaca cacagtggcc tgagctcaa ctccagcatg

240

accacgctgg agcttcagca gtactggcag aaccagaaat gccgctggaa gcacgtcaaa

300

ctgctctttg agatcgcttc agctcgcatc gaggagagaa aagtctctaa gtttgatg

360

gggaaatcaa ggctggaga gatgacttat ccagggtcac gtggcgagac agggacagca

420

ccagaaccag acccgagatg tccacgtcaa agtgacatgc tctgagaggc agcacacaca

480

gaataacct gcacccaaat tccaggaagc tcttaggggt catccagctg ggcctagggg

540

tgcagggtca gtgctgaggc ctgggcaggg ccgctagc

578

&lt;210&gt; 5662

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5662

Met Thr Leu Leu Pro Asp Pro Trp Thr His Thr Ala Leu Gly Thr Gly

1

5

10

15

Cys Leu Gly Ala Cys Lys Ser Arg Ala Pro Trp Glu Pro Trp Cys Met

20

25

30

Gly Pro Ile Thr Gln Cys Thr Ala Arg Thr Gln Gln Glu Ala Pro Ala

35

40

45

Thr Gly Pro Asp Leu Pro His Pro Gly Pro Asp Gly His Leu Asp Thr

50

55

60

His Ser Gly Leu Ser Ser Asn Ser Ser Met Thr Thr Arg Glu Leu Gln

65

70

75

80

Gln Tyr Trp Gln Asn Gln Lys Cys Arg Trp Lys His Val Lys Leu Leu

85

90

95

Phe Glu Ile Ala Ser Ala Arg Ile Glu Glu Arg Lys Val Ser Lys Phe

100

105

110

Val Met Gly Lys Ser Arg Pro Gly Glu Met Thr Tyr Pro Gly Ser Arg

115

120

125

Gly Glu Thr Gly Thr Ala Pro Glu Pro Asp Pro Arg Cys Pro Arg Gln

130

135

140

Ser Asp Met Leu



145

&lt;210&gt; 5663

&lt;211&gt; 857

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5663

```

tttttttttt tttttttgca gtaagtaact cagaatgact ttactcagga aatatgacca
60
tgactcactg gctaggagtg ccccatgccc agttcttaga gacccttgat agtccttaga
120
agacaggagg ctgccgtggt caagaagggc caagccttga agtctcacgg caccctctgt
180
ggtggaggta taaggctcag gggccaacta ctgggtcttg cagtcccat cgttgctgtg
240
ggctgtcttc accttcttta gttccttctg tagctcagac tcggccacca caacctcctt
300
tggtctctgg taagagatga tcagggtgca gttggcgtgg gcaaagctca gcaaggcgtc
360
atccagaggt agctgggtgc tatctagatc aggaatggag aacttcttgt agtacttctt
420
gttggttgtt ctgacaatga tgcagcgtc cttctgttcc acagagacac tatagacatc
480
cttaggatag gggagggttc gaatccgcc caaggaaactc atcttggtgt ccttgccat
540
gaagatagga ttggcattgc ttctcttgat gagttcaggc cccagggttc ctgctcctag
600
gggcgtctgg tctcctactt caagctgcc caaggccatg gctccagggg cacttttcac
660
acgccacttt ctcaagaagta gttcactcgt cttctcgtca tattcttcag ccatttcctt
720
gccgtctggg aataaatagt gaaccttcct tctcccgctc tgcagcagcg cagtcttctg
780
ggctgtccgc agactctcca accagcccgt caccgccatc tttccctgc taagcagcac
840
gcccagccgc tgccatg
857

```

&lt;210&gt; 5664

&lt;211&gt; 203

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5664

```

Met Ala Val Thr Gly Trp Leu Glu Ser Leu Arg Thr Ala Gln Lys Thr
1      5      10      15
Ala Leu Leu Gln Asp Gly Arg Arg Lys Val His Tyr Leu Phe Pro Asp
20      25      30
Gly Lys Glu Met Ala Glu Glu Tyr Asp Glu Lys Thr Ser Glu Leu Leu
35      40      45
Val Arg Lys Trp Arg Val Lys Ser Ala Leu Gly Ala Met Gly Gln Trp
50      55      60
Gln Leu Glu Val Gly Asp Pro Ala Pro Leu Gly Ala Gly Asn Leu Gly

```

65		70		75		80									
Pro	Glu	Leu	Ile	Lys	Glu	Ser	Asn	Ala	Asn	Pro	Ile	Phe	Met	Arg	Lys
		85		90		95									
Asp	Thr	Lys	Met	Ser	Phe	Gln	Trp	Arg	Ile	Arg	Asn	Leu	Pro	Tyr	Pro
		100		105		110									
Lys	Asp	Val	Tyr	Ser	Val	Ser	Val	Asp	Gln	Lys	Glu	Arg	Cys	Ile	Ile
		115		120		125									
Val	Arg	Thr	Thr	Asn	Lys	Lys	Tyr	Tyr	Lys	Lys	Phe	Ser	Ile	Pro	Asp
		130		135		140									
Leu	Asp	Arg	His	Gln	Leu	Pro	Leu	Asp	Asp	Ala	Leu	Leu	Ser	Phe	Ala
		145		150		155									
His	Ala	Asn	Cys	Thr	Leu	Ile	Ile	Ser	Tyr	Gln	Lys	Pro	Lys	Glu	Val
		165		170		175									
Val	Val	Ala	Glu	Ser	Glu	Leu	Gln	Lys	Glu	Leu	Lys	Lys	Val	Lys	Thr
		180		185		190									
Ala	His	Ser	Asn	Asp	Gly	Asp	Cys	Lys	Thr	Gln					
		195		200											

&lt;210&gt; 5665

&lt;211&gt; 531

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5665

gtcaagtcct gtaggcagca tagggccctg gctcagcttt tctctgcaga ggcctcgctt  
60  
gagtgggtgg ggtttgcccg cccgcagatc tccacgggag ggggaggggt caggcctccc  
120  
cagcggcct ctgaagtcac ttgcttcacg gaggtgttac tgtctgctgc tggacagagc  
180  
atgatggggg ctgcaagggc tccctcaaac cctggactcc tccaacagag ggctcctggt  
240  
tgccaggctc agctctgccc tgcgtcgccc ccagggcgta gggaggggtgt ttaatcctgg  
300  
cccgggcctt ccccgaggt ggagcgcgtg tcgcacccgc tgctgcagca gcagtatgag  
360  
ctgtaccggg agcgctgct gcagcgatgc gagcggcgcc cgggtggagca ggtgctgtac  
420  
cacggcacga cggcaccggc agtgctgac atctgcgccc acggcttcaa ccgcagcttc  
480  
tgcgcccgca acgccacggg ctacgggaag ggcggtatt tcgccaggcg c  
531

&lt;210&gt; 5666

&lt;211&gt; 79

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5666

Ser	Trp	Pro	Gly	Pro	Ser	Pro	Gln	Val	Glu	Arg	Val	Ser	His	Pro	Leu
1				5				10					15		
Leu	Gln	Gln	Gln	Tyr	Glu	Leu	Tyr	Arg	Glu	Arg	Leu	Leu	Gln	Arg	Cys
		20					25					30			
Glu	Arg	Arg	Pro	Val	Glu	Gln	Val	Leu	Tyr	His	Gly	Thr	Thr	Ala	Pro

35 40 45  
 Ala Val Pro Asp Ile Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly  
 50 55 60  
 Arg Asn Ala Thr Val Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg  
 65 70 75

&lt;210&gt; 5667

&lt;211&gt; 858

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5667

nattcggcac gaggtagtca aagtatgcag cctccaatta ttccactctt ccctgttgct  
 60  
 aagaaagata tgacatttct acatgaagga aatgactcca aagtagatgg tttagtaaac  
 120  
 tttgagaagt taagaatgat ttccaaggaa atccgccaag ttgttcgaat gacttctgct  
 180  
 aacatggacc cagctatgat gtttcgacag aggtcactga gtcaaggaag cacaaattca  
 240  
 aacatgctgg atgttcaggg aggtgctcac aaaaaaaggg cagccgcag ctctctgctt  
 300  
 aatgccaaga agctatatga ggatgcccaa atggcaagga aggtgaagca gtatctttcc  
 360  
 agtctcgatg tagagacaga tgaggagaag ttccagatga tgtcattaca gntggagcct  
 420  
 gcatatggta cctgtgagta caagttttca tttatgtgac gctaaagagc acaacaaaat  
 480  
 aaaaacttat ttctctagaa ttatacctaa gtccaagaa aattaacttt cactcacaaa  
 540  
 agattgctgg cataccttaa gcatcatgtg atccaattaa tcacagactg aatcccatcc  
 600  
 attcctgatg gctacactat ccaaaaaata gagggataag tagatcttta aaaagctttt  
 660  
 taattctttt aaaaactgga tcattataga ggaggctttc tgtttgagaa catttttata  
 720  
 ttcaccccta aagagtaaac ataagtggaa tttttacctc tttttatttc atggataata  
 780  
 tttaccaact agaaaatata agaaatttga ttaaaacacc agtgataata ggtagcttac  
 840  
 aggtgccagt agtaaggt  
 858

&lt;210&gt; 5668

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5668

Xaa Ser Ala Arg Gly Ser Gln Ser Met Gln Pro Pro Ile Ile Pro Leu  
 1 5 10 15  
 Phe Pro Val Val Lys Lys Asp Met Thr Phe Leu His Glu Gly Asn Asp  
 20 25 30  
 Ser Lys Val Asp Gly Leu Val Asn Phe Glu Lys Leu Arg Met Ile Ser

35	40	45
Lys Glu Ile Arg Gln Val Val Arg Met Thr Ser Ala Asn Met Asp Pro		
50	55	60
Ala Met Met Phe Arg Gln Arg Ser Leu Ser Gln Gly Ser Thr Asn Ser		
65	70	75
Asn Met Leu Asp Val Gln Gly Gly Ala His Lys Lys Arg Ala Arg Arg		
85	90	95
Ser Ser Leu Leu Asn Ala Lys Lys Leu Tyr Glu Asp Ala Gln Met Ala		
100	105	110
Arg Lys Val Lys Gln Tyr Leu Ser Ser Leu Asp Val Glu Thr Asp Glu		
115	120	125
Glu Lys Phe Gln Met Met Ser Leu Gln Xaa Glu Pro Ala Tyr Gly Thr		
130	135	140
Cys Glu Tyr Lys Phe Ser Phe Met		
145	150	

&lt;210&gt; 5669

&lt;211&gt; 1842

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5669

```

tttgtgctgt caccggcac agacctgct gccgacctct acaagtttgc cgaagaaatg
60
aagttctcca aaaagctctc tgccatctcc ctggggccagg ggcagggccc tcgggcagaa
120
gccatgatgc gcagctccat agagaggggc aaatgggtct tcttcagaa ctgccacctg
180
gcaccaagct ggatgccagc cctagaacgc ctcacgagc acatcaaccc cgacaaggta
240
cacagggact tccgcctctg gctcaccagc ctgcccagca acaagttccc agtgtccatc
300
ctgcagaacg gctccaagat gaccattgag ccgccacgcg gtgtcagggc caacctgctg
360
aagtctctata gtagccttgg tgaagacttc ctcaactcct gccacaaggt gatggagtgc
420
aagtctctgc tgctgtctct gtgcttgctc catgggaacg ccctggagcg ccgtaagttt
480
gggcccctgg gcttcaacat cccctatgag ttcacggatg gagatctgag catctgcac
540
agccagctca agatgttcct ggacgaatat gatgacatcc cctacaaggt cctcaagtac
600
acggcagggg agatcaatta cgggggccgt gtcactgatg actgggaccg gcgctgcac
660
atgaacatct tggaggactt ctacaaccct gacgtgctct ccctgagca cagctacagc
720
gcctcgggca tctaccacca gatccgcct acctacgacc tccacggcta cctctcctac
780
atcaagagcc tccactcaa tgatatgcct gagatctttg gcctgcatga caatgccaac
840
atcacctttg ccagaacga gacgttcgcc ctctgggca ccatcatcca gctgcaaccc
900
aaatcatctt ctgcaggcag ccagggccgg gaggagatag tggaggacgt caccctaaac
960

```

attctgctca aggtgcctga gcctatcaac ttgcaatggg tgatggccaa gtacccagtg  
 1020  
 ctgtatgagg aatcaatgaa cacagtacta gtacaagagg tcattaggta caatcggctg  
 1080  
 ctgcaggtga tcacacagac actgcaagac ctactcaagg cactcaaggg gctggtagtg  
 1140  
 atgtcctctc agctggagct gatggctgcc agcctgtaca acaatactgt gcctgagctc  
 1200  
 tggagtgcc aaggctaccc atcgctcaag cctctgtcat catgggtcat ggacctgctg  
 1260  
 caacgcctgg actttctgca ggcttgatc caagatggca tcccagctgt cttctggatc  
 1320  
 agtggattct tcttccccca ggctttctta acaggcactc tgcagaattt tgcccgcaa  
 1380  
 tttgtcatct ccattgacac catctccttt gatttcaagg tgatgtttga ggcaccatca  
 1440  
 gagttaacac aaagacccca agtaggggtgc tatatccatg gattattcct ggaaggtgcc  
 1500  
 cgctgggac cagaggcctt ccagctggct gagtctcagc ccaaggagct gtacacagag  
 1560  
 atggccgtta tctggctctt gccaacaccc aaccgcaagg cccaggacca ggacttttac  
 1620  
 ctgtgcccc tctacaagac actgactcgt gctggaacac tatcaaccac aggacactct  
 1680  
 accaactatg tcattgctgt ggagatcccc acccatcagc cccagcgaca ctggataaag  
 1740  
 cgtggtgtgg cctcatctg tgcctggac tactagactc agacagaagg gctggggcca  
 1800  
 ttaaagctga attttctaag caaaaaaaaaa aaaaaaaaaa aa  
 1842

&lt;210&gt; 5670

&lt;211&gt; 591

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5670

Phe	Val	Leu	Ser	Pro	Gly	Thr	Asp	Pro	Ala	Ala	Asp	Leu	Tyr	Lys	Phe
1				5					10					15	
Ala	Glu	Glu	Met	Lys	Phe	Ser	Lys	Lys	Leu	Ser	Ala	Ile	Ser	Leu	Gly
			20						25					30	
Gln	Gly	Gln	Gly	Pro	Arg	Ala	Glu	Ala	Met	Met	Arg	Ser	Ser	Ile	Glu
			35						40					45	
Arg	Gly	Lys	Trp	Val	Phe	Phe	Gln	Asn	Cys	His	Leu	Ala	Pro	Ser	Trp
			50						55					60	
Met	Pro	Ala	Leu	Glu	Arg	Leu	Ile	Glu	His	Ile	Asn	Pro	Asp	Lys	Val
65					70					75					80
His	Arg	Asp	Phe	Arg	Leu	Trp	Leu	Thr	Ser	Leu	Pro	Ser	Asn	Lys	Phe
					85					90					95
Pro	Val	Ser	Ile	Leu	Gln	Asn	Gly	Ser	Lys	Met	Thr	Ile	Glu	Pro	Pro
					100					105					110
Arg	Gly	Val	Arg	Ala	Asn	Leu	Leu	Lys	Ser	Tyr	Ser	Ser	Leu	Gly	Glu
					115					120					125
Asp	Phe	Leu	Asn	Ser	Cys	His	Lys	Val	Met	Glu	Phe	Lys	Ser	Leu	Leu

130	135	140
Leu Ser Leu Cys Leu Phe His Gly Asn Ala Leu Glu Arg Arg Lys Phe		
145	150	155
Gly Pro Leu Gly Phe Asn Ile Pro Tyr Glu Phe Thr Asp Gly Asp Leu		
165	170	175
Arg Ile Cys Ile Ser Gln Leu Lys Met Phe Leu Asp Glu Tyr Asp Asp		
180	185	190
Ile Pro Tyr Lys Val Leu Lys Tyr Thr Ala Gly Glu Ile Asn Tyr Gly		
195	200	205
Gly Arg Val Thr Asp Asp Trp Asp Arg Arg Cys Ile Met Asn Ile Leu		
210	215	220
Glu Asp Phe Tyr Asn Pro Asp Val Leu Ser Pro Glu His Ser Tyr Ser		
225	230	235
Ala Ser Gly Ile Tyr His Gln Ile Pro Pro Thr Tyr Asp Leu His Gly		
245	250	255
Tyr Leu Ser Tyr Ile Lys Ser Leu Pro Leu Asn Asp Met Pro Glu Ile		
260	265	270
Phe Gly Leu His Asp Asn Ala Asn Ile Thr Phe Ala Gln Asn Glu Thr		
275	280	285
Phe Ala Leu Leu Gly Thr Ile Ile Gln Leu Gln Pro Lys Ser Ser Ser		
290	295	300
Ala Gly Ser Gln Gly Arg Glu Glu Ile Val Glu Asp Val Thr Gln Asn		
305	310	315
Ile Leu Leu Lys Val Pro Glu Pro Ile Asn Leu Gln Trp Val Met Ala		
325	330	335
Lys Tyr Pro Val Leu Tyr Glu Glu Ser Met Asn Thr Val Leu Val Gln		
340	345	350
Glu Val Ile Arg Tyr Asn Arg Leu Leu Gln Val Ile Thr Gln Thr Leu		
355	360	365
Gln Asp Leu Leu Lys Ala Leu Lys Gly Leu Val Val Met Ser Ser Gln		
370	375	380
Leu Glu Leu Met Ala Ala Ser Leu Tyr Asn Asn Thr Val Pro Glu Leu		
385	390	395
Trp Ser Ala Lys Ala Tyr Pro Ser Leu Lys Pro Leu Ser Ser Trp Val		
405	410	415
Met Asp Leu Leu Gln Arg Leu Asp Phe Leu Gln Ala Trp Ile Gln Asp		
420	425	430
Gly Ile Pro Ala Val Phe Trp Ile Ser Gly Phe Phe Phe Pro Gln Ala		
435	440	445
Phe Leu Thr Gly Thr Leu Gln Asn Phe Ala Arg Lys Phe Val Ile Ser		
450	455	460
Ile Asp Thr Ile Ser Phe Asp Phe Lys Val Met Phe Glu Ala Pro Ser		
465	470	475
Glu Leu Thr Gln Arg Pro Gln Val Gly Cys Tyr Ile His Gly Leu Phe		
485	490	495
Leu Glu Gly Ala Arg Trp Asp Pro Glu Ala Phe Gln Leu Ala Glu Ser		
500	505	510
Gln Pro Lys Glu Leu Tyr Thr Glu Met Ala Val Ile Trp Leu Leu Pro		
515	520	525
Thr Pro Asn Arg Lys Ala Gln Asp Gln Asp Phe Tyr Leu Cys Pro Ile		
530	535	540
Tyr Lys Thr Leu Thr Arg Ala Gly Thr Leu Ser Thr Thr Gly His Ser		
545	550	555
Thr Asn Tyr Val Ile Ala Val Glu Ile Pro Thr His Gln Pro Gln Arg		

```

<400> 5672
Met Asn Val Gln Pro Cys Ser Arg Cys Gly Tyr Gly Val Tyr Pro Ala
  1              5              10              15
Glu Lys Ile Ser Cys Ile Asp Gln Ile Trp His Lys Ala Cys Phe His
      20              25              30
Cys Glu Val Cys Lys Met Met Leu Ser Val Asn Asn Phe Val Ser His
      35              40              45
Gln Lys Lys Pro Tyr Cys His Ala His Asn Pro Lys Asn Asn Thr Phe
      50              55              60
Thr Ser Val Tyr His Thr Pro Leu Asn Leu Asn Val Arg Thr Phe Pro
65              70              75              80

```

```
<210> 5673
<211> 1279
<212> DNA
<213> Homo sapiens
```

```

<400> 5673
nttttttttt tttgaagcca gcatttcctt ttattttctgg atggaaacgg ggcctaaaa
60
gcagaaatca atatttttgt ttgaaagatg cagtcatgct aatttcactt ttggctaaaa
120
ccgagacgat aaaagaacag ttgggtgttt ataggatgcc ctcaaagtga gctggctaag
180
tgagctgggc tctaacttca ctcaaaatt tatagtacag ctaagaaggc cagtctgtcc
240
atgaaaggga gccgagacaa gacgaggggc gcctcttcca ggctgtgcc aagtgtcctt
300
ggggtccgc catggtccac acttctgcag catccgcaga acatgtggcc gggctcctgcc
360
cagcagcagg gacagccaag tgggaggcag gcatggtgca cacctgggga ggccccctgg
420
gcagaagcag cccacagta gcagcccat ccagaggaag accactcgg agggccacag
480
gcctctgcag ccctggcact gccgccagc cctccatctc agcgggatgt gcagggtgag
540
acaggaatgc agggacgttc tgcccctagg tcagcctctt catccgctg ttgtgcttcg
600
atggtcaagg ttgccctgtc cacagctgct gcaacgccat ccagggtctt gtcttgtctc
660
tccagctcac tctcgctc cgggccagcc ccttcacct cctcaggatc tgggttagtt
720
cctgggtatc tgcttcagaa agggctggca ggcttgtctg caggtgcagt gctgtgcctt
780
cctggtctcc tgcggtggc tcacggtgca gggtagggc catcagccca gatgctgcatt
840

```



gccagactga gcagctcttc tctgcggggg aagaggttct tgcgcttctg agcaccaatg  
 900  
 catctttctaa cagctccatc ttcttgctga actgcacttc taaaatgggg ataacctctg  
 960  
 gcatcttggc agatatcaaa cgataggcca tgtctggctt tccaataaac cgctggcgga  
 1020  
 tgctaatttc gtaaggtgag tggaccttga tgcgtccac gtcttctctt tcaaacctgt  
 1080  
 gcatgagcaa agaactggag tcatgtattt ccaaccaga cacaaggacg gtgagcctcc  
 1140  
 ctggtttaac gtgagactct gttctgtggg aaataacagc aggaattttt atcagtatcc  
 1200  
 cttctttccc aaaggggtca caactggtca tggagacatc ttccctgggc tttgtttccg  
 1260  
 gtggtgtctt ccaaagctt  
 1279

&lt;210&gt; 5674

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5674

Leu	His	Ser	Gln	Ile	Tyr	Ser	Thr	Ala	Lys	Lys	Ala	Ser	Leu	Ser	Met
1			5						10				15		
Lys	Gly	Ser	Arg	Asp	Lys	Thr	Arg	Ala	Ala	Ser	Ser	Arg	Pro	Val	Pro
			20					25				30			
Ser	Val	Leu	Gly	Val	Pro	Pro	Trp	Ser	Thr	Leu	Leu	Gln	His	Pro	Gln
		35					40					45			
Asn	Met	Trp	Pro	Gly	Pro	Ala	Gln	Gln	Gln	Gly	Gln	Pro	Ser	Gly	Arg
	50					55				60					
Gln	Ala	Trp	Cys	Thr	Pro	Gly	Glu	Ala	Pro	Gly	Ala	Glu	Ala	Ala	Pro
65					70					75				80	
Gln															

&lt;210&gt; 5675

&lt;211&gt; 1074

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5675

nttttccact taaatacaaa ctttattctc tctccaagaa gatgcagacg tcacaggtgg  
 60  
 ccctgagctc ccacccgagg cttaggccca aggggcctct tccaggctga gggcctgctg  
 120  
 gggctggggc aggggctgag gctgaaagca gcagcctgcc tagtgggtga cgccaggggc  
 180  
 cgggtgtaaca tggcaccgag gttggggcca cagcaatgtg tgggacggtg ggggtgggctg  
 240  
 gggcccttgg ctccaagcat tagttctcca agctctggtc cgttctctta cctccttcaa  
 300  
 ggggcaccag ggctacaagg tggtagttga gtattggggc ccgactcctg gggcactgga  
 360

gtggtctcta ggcccagggc cccaaggaga gggctgggtt tctgggagag tgctggctct  
 420  
 tcctctctgg gcttggccat cttgacagct tcatcgtagg aggggtggagg ctccgggggtg  
 480  
 tacaggctgt aggcaggagg agccgtggag tccaggtcca gctcccaaa gggcaggggc  
 540  
 aaccgcatgc ccagtgggta ctgcacggag ctgtaggagg tcacagtgt gtgtacaggg  
 600  
 ctgtcactgt ccatagggat gactgccacg tcgcagggt gccgtgctgg tggcagatgt  
 660  
 ggctgggcct gtgcctgctt ccggaggcag cagaaccgga cacaaccagc tgtgacacca  
 720  
 cacagcagaa gcaggaggac cgccagcagg atgagcctag gagagcaagg ctctaccact  
 780  
 ggactgaccc tcggccaccg ggcacctgca ccctggggaa tgtcgtggca caaccacga  
 840  
 agacagggtta acaggataaa aagcagacaa tgtctctcca tgcggagac cgccgtggcc  
 900  
 agagcctggc ctccggctgc tgggcctgcc ctggctatct ctctgggct ggccaggggt  
 960  
 ggccttgggc tcactcccag gactcgctgt cctcagcgag tgcccactg ctgagcggga  
 1020  
 tcgtagggga ctcccgcgga ggccaggcgg gagagtggg agggaaggtc ctgg  
 1074

&lt;210&gt; 5676

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5676

Glu Val Thr Val Leu Cys Thr Gly Leu Ser Leu Ser Ile Gly Met Thr  
 1 5 10 15  
 Ala Thr Ser Gln Gly Cys Arg Ala Gly Gly Arg Cys Gly Trp Ala Cys  
 20 25 30  
 Ala Cys Phe Arg Arg Gln Gln Asn Arg Thr Gln Pro Ala Val Thr Pro  
 35 40 45  
 His Ser Arg Ser Arg Arg Thr Ala Ser Arg Met Ser Leu Gly Glu Gln  
 50 55 60  
 Gly Ser Thr Thr Gly Leu Thr Leu Gly His Arg Ala Pro Ala Pro Trp  
 65 70 75 80  
 Gly Met Ser Trp His Asn His Arg Arg Gln Val Asn Arg Ile Lys Ser  
 85 90 95  
 Arg Gln Cys Leu Ser Met Ser Glu Thr Ala Val Ala Arg Ala Trp Pro  
 100 105 110  
 Arg Ala Ala Gly Pro Ala Leu Ala Ile Ser Pro Gly Leu Ala Arg Gly  
 115 120 125  
 Gly Leu Gly Leu Thr Pro Arg Thr Arg Cys Pro Gln Arg Val Pro His  
 130 135 140  
 Cys  
 145

&lt;210&gt; 5677

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5677

```

agcagctggt cctctttgaa gaggtcgatg ctgaaaggag gccgcctgac tccatggcaa
60
aaaaggacac tggatgaagta gcggtagcac tcctccacgt tgcccaaggg ggttgctggt
120
agggaaagca agatgcagca gtgaggccct ctctggatc cattcattca cttcactcaa
180
cagctgttta tgacctgag caatacaagc cttgtgaaga tcctggagca gggcacaagc
240
cgctgacgtc tgctccagtg agaagccctg ctgccttccc caattcgctt tctttccgca
300
gccgccgctg ccccgacccc ggatctgcat gtggaagtac ctggacgtcc attccatgca
360
ccagctggag aagaccacca atgctgagat gagggaggtg ctggctgagc tgctggagct
420
agggtgtcct gacgagagcc tgagcgacgc catcacctg gacctcttct gccgcgg
477

```

&lt;210&gt; 5678

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5678

```

Met Ala Ser Leu Arg Leu Cys Ser Gly His Pro Ser Ser Ser Ser Ser
 1           5           10           15
Ala Ser Thr Ser Leu Ile Ser Ala Leu Val Val Phe Ser Ser Trp Cys
 20           25           30
Met Glu Trp Thr Ser Arg Tyr Phe His Met Gln Ile Arg Gly Arg Gly
 35           40           45
Ser Gly Gly Cys Gly Lys Lys Ala Asn Trp Gly Arg Gln Gln Gly Phe
 50           55           60
Ser Leu Glu Gln Thr Ser Ala Ala Cys Ala Leu Leu Gln Asp Leu His
 65           70           75           80
Lys Ala Cys Ile Ala His Gly His Lys Gln Leu Leu Ser Glu Val Asn
 85           90           95
Glu Trp Ile Pro Glu Arg Ala Ser Leu Leu His Leu Ala Phe Pro Thr
100           105           110
Ser Asn Pro Leu Gly Gln Arg Gly Gly Val Leu Pro Leu Leu His Gln
115           120           125
Cys Pro Phe Leu Pro Trp Ser Gln Ala Ala Ser Phe Gln His Arg Pro
130           135           140
Leu Gln Arg Gly Thr Ala Ala
145           150

```

&lt;210&gt; 5679

&lt;211&gt; 665

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5679

nngccctcc agggaggagc cgggagatta cgcagctcca tgtaggtcta cgtttaggtt  
 60  
 gggaggatct accatgaaga aggtcaagaa gaaaaggcca gaggccagac gccaccggac  
 120  
 tccacctccc agcatgctgg ctccaattcc acctctcagc agcctagccc tgaatccaca  
 180  
 ccacagcagc ctagtctga atccacacca cagcagccta gccctgaatc cacaccacag  
 240  
 cattccagcc ttgaaaccac ctcccggcag ccagcattcc aagcccttcc agcaccggaa  
 300  
 atccgcccgt cctcttgctg ccttttatct ccagatgcta acgtgaaggc agccctcaa  
 360  
 tccaggaaag cagaaaatct tcaagaaaac cctccagtca tcgtaacgcy tgtcctccaa  
 420  
 gccctcgga ctgtggctgt ggctctgggg gctctaggag ctgcctacta catcactgaa  
 480  
 tccttgta caagccccta ggcccacagt ctggcagacc tccaccagcc ccaggagtgt  
 540  
 ataggtgatg gcgctgggag aagatgttca gaatatctca aaagccaagt ccagaagatc  
 600  
 cagtttccat caaggggacc tctcttgta ccaaaattta aaaaaagaaa aaaaaaacga  
 660  
 aaaaa  
 665

&lt;210&gt; 5680

&lt;211&gt; 143

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5680

Val Gly Arg Ile Tyr His Glu Glu Gly Gln Glu Glu Lys Val Arg Gly  
 1 5 10 15  
 Gln Thr Pro Pro Asp Ser Thr Ser Gln His Ala Gly Ser Asn Ser Thr  
 20 25 30  
 Ser Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln Gln Pro Ser Pro Glu  
 35 40 45  
 Ser Thr Pro Gln Gln Pro Ser Pro Glu Ser Thr Pro Gln His Ser Ser  
 50 55 60  
 Leu Glu Thr Thr Ser Arg Gln Pro Ala Phe Gln Ala Leu Pro Ala Pro  
 65 70 75 80  
 Glu Ile Arg Arg Ser Ser Cys Cys Leu Leu Ser Pro Asp Ala Asn Val  
 85 90 95  
 Lys Ala Ala Pro Gln Ser Arg Lys Ala Glu Asn Leu Gln Glu Asn Pro  
 100 105 110  
 Pro Val Ile Val Thr Arg Val Leu Gln Ala Leu Gly Thr Val Ala Val  
 115 120 125  
 Ala Leu Gly Ala Leu Gly Ala Ala Tyr Tyr Ile Thr Glu Ser Leu  
 130 135 140

&lt;210&gt; 5681

&lt;211&gt; 1402

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5681

gggcggcctg gcagctggcg gcattgagggc ggaccgtcta gaggtccgtc tgaccgcggc  
60  
gtcgggacct ggtttccggg catgagctga gagcaccacg ccgaggccac gagtatttca  
120  
tagacattga tggaagcaga aacaaaaact cttcccctgg agaatgcac catcctttca  
180  
gagggctctc tgcaggaagg acaccgatta tggattggca acctggacce caaaattacc  
240  
gaataccacc tctcaagct cctccagaag ttgggaagg taaagcagtt tgacttcctc  
300  
ttccacaagt cagggtgcttt ggagggacag cctcgaggct actgttttgt taactttgaa  
360  
actaagcagg aagcagagca agccatccag tgtctcaatg gcaagttggc cctgtccaag  
420  
aagctggtgg tgcgatggc acatgctcaa gtaaagagat atgatcataa caagaatgat  
480  
aagattcttc caatcagtct cgagccatcc tcaagcactg agcctactca gtctaacct  
540  
agtgtcactg caaagataaa agccattgaa gcaaaactga aaatgatggc ggaaaatcct  
600  
gatgcagagt atccagcagc gcctgtttat tctacttta agccaccaga taaaaaagg  
660  
actactccat attctagaac agcatggaaa tctcgaagat gatggttggt aattactgta  
720  
gcagcaaaag caaattggtc tccacaccta aaatcgctg cctgtgtact ttgtagatgt  
780  
gaatggtact attcaacgga gcacaatcac atgttagcat ttggtaacat aatgtttttg  
840  
gatgttctta tggatgttct ttcctaatac tatgtatgga attgagcatc atccagaata  
900  
aatagcgttg tateccaaat tgtgatttga accctgggat gctctaattg gctggttggt  
960  
ttggatttgt aactccagaa acattctata gtgtgccaga gcaaaaggca aatacacaaa  
1020  
atattattta aatcaggaaa ctaaaaatat taacatctat taaaaaattg agcatttttc  
1080  
tacgctcgtg tgtcttttac aacataaaga aaaagtaaaa ggcagggagg gaagtgagag  
1140  
acagatttta aatcatgttc agaactgttg ttccagaatt tactacggca atccctccaa  
1200  
ctggactgaa aaagagaaag ttcttgcaa aaaggagctg attctttgaa caaatgttgt  
1260  
agtaatctgt ttaagaatta tgcttattgt ttcaaatcc caactaggaa aacatggtgt  
1320  
atatcttaaa attgtttgtg ttgacaaaac tagaatcaaa tttaacattt tataccacat  
1380  
cacaagttct atttgggata tt  
1402

&lt;210&gt; 5682

&lt;211&gt; 190

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5682

```

Met Glu Ala Glu Thr Lys Thr Leu Pro Leu Glu Asn Ala Ser Ile Leu
 1           5           10           15
Ser Glu Gly Ser Leu Gln Glu Gly His Arg Leu Trp Ile Gly Asn Leu
 20           25           30
Asp Pro Lys Ile Thr Glu Tyr His Leu Leu Lys Leu Leu Gln Lys Phe
 35           40           45
Gly Lys Val Lys Gln Phe Asp Phe Leu Phe His Lys Ser Gly Ala Leu
 50           55           60
Glu Gly Gln Pro Arg Gly Tyr Cys Phe Val Asn Phe Glu Thr Lys Gln
 65           70           75           80
Glu Ala Glu Gln Ala Ile Gln Cys Leu Asn Gly Lys Leu Ala Leu Ser
 85           90           95
Lys Lys Leu Val Val Arg Trp Ala His Ala Gln Val Lys Arg Tyr Asp
 100          105          110
His Asn Lys Asn Asp Lys Ile Leu Pro Ile Ser Leu Glu Pro Ser Ser
 115          120          125
Ser Thr Glu Pro Thr Gln Ser Asn Leu Ser Val Thr Ala Lys Ile Lys
 130          135          140
Ala Ile Glu Ala Lys Leu Lys Met Met Ala Glu Asn Pro Asp Ala Glu
 145          150          155          160
Tyr Pro Ala Ala Pro Val Tyr Ser Tyr Phe Lys Pro Pro Asp Lys Lys
 165          170          175
Arg Thr Thr Pro Tyr Ser Arg Thr Ala Trp Lys Ser Arg Arg
 180          185          190

```

&lt;210&gt; 5683

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5683

```

ggatccatgc gttgccctag ggaggcctca gctgtcaagc actgaccatc tctgcagaca
 60
cgcagggctg acctgtactg gtgagtaagc attagccatg ggacgcacac aatccagcca
 120
atgctttcag aaggcaccac atgtgatgca cagcctctat ttacatgtga ataattacac
 180
tgctgctttc tgggtaaaag tagggaaata cagtgttcca gggcatagga atggtgctct
 240
gggtagaaaa gtttattttg ctggtgggag gcagggtttg ttaataaagc tttgaaatac
 300
acaaatttca ttctggatgc tgatgctg
 328

```

&lt;210&gt; 5684

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5684

```

Met Lys Phe Val Tyr Phe Lys Ala Leu Leu Thr Lys Pro Ala Ser His

```

```

      1             5             10             15
Gln Gln Asn Lys Leu Phe Tyr Pro Glu His His Ser Tyr Ala Leu Glu
      20             25             30
His Cys Ile Ser Leu Leu Leu Thr Arg Lys Gln Gln Cys Asn Tyr Ser
      35             40             45
His Val Asn Arg Gly Cys Ala Ser His Val Val Pro Ser Glu Ser Ile
      50             55             60
Gly Trp Ile Val Cys Val Pro Trp Leu Met Leu Thr His Gln Tyr Arg
      65             70             75             80
Ser Ala Leu Arg Val Cys Arg Asp Gly Gln Cys Leu Thr Ala Glu Ala
      85             90             95
Ser Leu Gly Gln Arg Met Asp
      100

```

&lt;210&gt; 5685

&lt;211&gt; 604

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5685

```

ccatgcagcc gcgtgggtgg caagcgggtg gtgtgctatg acgacagatt cattgtgaag
60
ctggcctacg agtctgacgg gatcgtggtt tccaacgaca cataccgtga cctccaaggc
120
gagcggcagg agtgaagcg cttcatcgag gagcggctgc tcatgtactc cttcgtcaat
180
gacaagtatg ttccctccca gaggcctga cagacttggg gtccacaggg gaagccagag
240
gtgcccttgg caaggggtgga gctgggggct gggctctgcg gggccctgtg gccatgggag
300
gttgcgggtc ttggctccag gcagctttga gagtgagacg gatagctcac cacataggag
360
aatcagacc gggaccaggc aggctgtggg gtggagagag tggctaattt gggagataga
420
gccgtagcac ttatgagggg atgtatgtgg ttgatggttc caggtggcct ctctacgaac
480
caacatggca tctctcgagc agaggccatg ggccagtggg tgcgggctgc catccccga
540
cgacttcagg gagggagtgc cctaaaggt gcccatgggc tgtggccctc tagaccgggg
600
atcc
604

```

&lt;210&gt; 5686

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5686

```

Pro Cys Ser Arg Val Gly Gly Lys Arg Val Val Cys Tyr Asp Asp Arg
1             5             10             15
Phe Ile Val Lys Leu Ala Tyr Glu Ser Asp Gly Ile Val Val Ser Asn
      20             25             30
Asp Thr Tyr Arg Asp Leu Gln Gly Glu Arg Gln Glu Trp Lys Arg Phe

```

35 40 45  
 Ile Glu Glu Arg Leu Leu Met Tyr Ser Phe Val Asn Asp Lys Tyr Val  
 50 55 60  
 Pro Ser Gln Arg Pro  
 65

<210> 5687  
 <211> 328  
 <212> DNA  
 <213> Homo sapiens

<400> 5687  
 actctctccc gaccgcgtgg tgcgggtaag ggtggtggtg atggtggtg tggtagcgc  
 60  
 ccccggtctt gcatgcacgc ctgcgtgaac accccgggct cttcccggtg cacctgcccc  
 120  
 ggtggatccg aaactctggc tgacgggaag agctgtgaga atgtggatga atgtgtgggc  
 180  
 ctgcagccgg tgtgccccca ggggaccaca tgcataca cgggtggaag cttccagtgt  
 240  
 gtcagccctg agtgccccga gggcagcggc aatgtgagct acgtgaagac gtctccattc  
 300  
 cagtgtgagc ggaaccctg ccccatgg  
 328

<210> 5688  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 5688  
 Thr Leu Ser Arg Pro Arg Gly Ala Gly Lys Gly Gly Gly Asp Gly Gly  
 1 5 10 15  
 Gly Gly Glu Arg Pro Arg Leu Cys Met His Ala Cys Val Asn Thr Pro  
 20 25 30  
 Gly Ser Ser Arg Cys Thr Cys Pro Gly Gly Ser Glu Thr Leu Ala Asp  
 35 40 45  
 Gly Lys Ser Cys Glu Asn Val Asp Glu Cys Val Gly Leu Gln Pro Val  
 50 55 60  
 Cys Pro Gln Gly Thr Thr Cys Ile Asn Thr Gly Gly Ser Phe Gln Cys  
 65 70 75 80  
 Val Ser Pro Glu Cys Pro Glu Gly Ser Gly Asn Val Ser Tyr Val Lys  
 85 90 95  
 Thr Ser Pro Phe Gln Cys Glu Arg Asn Pro Cys Pro Met  
 100 105

<210> 5689  
 <211> 1897  
 <212> DNA  
 <213> Homo sapiens

<400> 5689  
 nagtactaca aaatgtctgg cacatgacag atgctcatga taaaatgttt gacagttgaa  
 60



tgaacaatca gaatcataga agagtgtgag cactggtcct ttgtcttcca ggtgggacag  
120  
tgtgtgtgtg tcttcagcca ggctcctagt gggagagccc cactcagccc cagtttgaac  
180  
tctcgcccat cacctatcag tgccactncc tccagctctc gtctctgaaa cccgagagta  
240  
ccgctctcag tctccagtaa gaagcatgga tgaagctcct tgtgttaacg gccgctgggg  
300  
aacactgaga cccagggctc aaaggcagac tcctcagggt cccgggaagg gagcctttcc  
360  
ccagccagag gagacggctc tcctatcctc aatgggtggga gtttgtctcc aggaacggca  
420  
gctgtgggtg gctcttcttt ggacagtctc gtacaggcca tatctccaag tactccatct  
480  
gctgctgaag gatacgacct gaaaatagga ctttctttgg cccccgacg aggatcaacc  
540  
agatcagaaa gatctgagat taggatccat agatctgaat tgggatctaa acccgcttcc  
600  
agtagtaatc ccatggatgg catggacaat aggacagttg ggggaagtat gagacacctc  
660  
cctgaacaga caaatgggtg gcatacccca cctcacgtgg ccagtgcctc tgcagggggc  
720  
gtctccccag gtgcctcgcg tcggagtctg gaagccatca aagcgatgct ctccaaaggc  
780  
ccctcggcct ctgcagcact aagtcctcct cttgggtctt ctccaggctc tcctgggagc  
840  
cagagtttga gcagtggaga aacagtgcgc atccctcgcc cagggcctgc ccaaggagat  
900  
ggacattcct tacctcccat tgctcgccgc ctgggccacc accctccaca gtccctaaat  
960  
gttggcaaac ccctatacca gagtatgaac tgcaagccca tgcagatgta cgtgctggac  
1020  
attaaagaca ccaaggagaa ggggcgggtc aaatggaaag tatttaatat cagttctgtg  
1080  
gttggacctc ctgaaaccag cctgcatacc gtgttacaag gcaggggtga actcatcata  
1140  
tttggaggac tcatggacaa gaaacagaat gtgaagtact atccaaaaac aaacgccttg  
1200  
tactttgtac gagcaaagag ataattgtgt ctaaaccctc ttccttttct gtggctttta  
1260  
atttgggaatt ttccagtgtg taagcatttg gactgagaat tgggaaaaca aaattactcc  
1320  
cagaagccaa aactctttta ttcceaacgc aagtcactcc aggtcgggat caaatctcca  
1380  
ttaagaaaaa aaattatata taaatatata tatatatatt atatagccaa ctctgttgac  
1440  
aaaaaaaggg agagatttcc atcctgggtc agataaagtt gttgctgtgt tttaacaggg  
1500  
gctgggctgc ctttttctac cttgctggta actagaccaa gaagttagag aatagactaa  
1560  
catcagtaac ttcccaaaag aaactgaaga gccccctgta aatctttatg tggccttctt  
1620  
ggagttaaaa aatgaaaggg catatgtaag ttgcaaaggt ggagggtttt agactctcat  
1680

gcttcaggtg ctgtcggggg aaaagtaact gtttttcccc ttctcttaaa accacagagg  
 1740  
 acctgtgaca gctctgcaga aatgccagtg cctggcccc tcttgccctt tatggctgag  
 1800  
 gaaagttacc caacaaagga ttttattcca catttggtg cggggtcatt gtgaaataat  
 1860  
 gtttatgcag ccaacatctg aaaaaaaaaa aaaaaaa  
 1897

<210> 5690

<211> 54

<212> PRT

<213> Homo sapiens

<400> 5690

Thr	Ile	Arg	Ile	Ile	Glu	Glu	Cys	Glu	His	Trp	Ser	Phe	Val	Phe	Gln
1				5				10					15		
Val	Gly	Gln	Cys	Val	Val	Val	Phe	Ser	Gln	Ala	Pro	Ser	Gly	Arg	Ala
		20					25				30				
Pro	Leu	Ser	Pro	Ser	Leu	Asn	Ser	Arg	Pro	Ser	Pro	Ile	Ser	Ala	Thr
	35					40					45				
Xaa	Ser	Ser	Ser	Arg	Ser										
	50														

<210> 5691

<211> 1227

<212> DNA

<213> Homo sapiens

<400> 5691

aagcggaaaa acaattgcc aaggcaaccac attgagatgc aggccatggc agagatgtac  
 60  
 aaccgtcctg tggaggtgta ccagtacagc acagaaccca tcaacacatt ccatgggata  
 120  
 catcaaaaacg aggacgaacc cattcgtgtt agctaccatc ggaatatcca ctataattca  
 180  
 gtgggtgaatc ctaacaaggc caccattggt gtggggctgg gctgccatca ttcaaaccag  
 240  
 ggtttgcaga gcagtctctg atgaagaatg ccataaaaac atcggaggag tcatggattg  
 300  
 aacagcagat gctagaagac aagaaacggg ccacagactg ggaggccaca aatgaagcca  
 360  
 tcgaggagca ggtggctcgg gaatcctacc tgcagtgggt gcgggatcag gagaacagg  
 420  
 ctgccaggt cggaggcccc agccagcccc ggaaagccag cgccacatgc agttcggcca  
 480  
 cagcagcagc ctccagtggc ctggaggagt ggactagccg gtccccggg cagcggagtt  
 540  
 cagcctcgtc acctgagcac cctgagctgc atgctgaatt gggcatgaag ccccttccc  
 600  
 caggcactgt tttagctctt gccaaacctc cttcgccctg tgcgccaggt acaagcagtc  
 660  
 atttctcggc aggggcccag cgggcaactt ccccttctgt gtcctctac cctgctttgg  
 720

agtgcggggc cctcattcag cagatgtccc cctctgcctt tggctcgaat gactgggatg  
 780  
 atgatgagat cctagcttcg gtgctggcag tgteccaaca ggaataccta gacagtatga  
 840  
 agaaaaacaa agtgcacaga gacccgcccc cagacaagag ttgatggaga cccagggatt  
 900  
 ggacaccatc tcccaacccc agggattcgg gcaaggggtgc cgaagataga caagaggcac  
 960  
 acagagacag accaactggc agccaggcag ccccagagga gagagacatt cagacagagg  
 1020  
 aaagtctccc tgccctcat tccttccaag atgagaaaaa cttgccgcca cccccgaca  
 1080  
 ctgatgccag ggaggtggga ggaagaagtg ggaaatttcc cttcccagta cccccaagaa  
 1140  
 cgtctgagcc ttcaatgttg aattttttct ttattaaaat tacttttatc ttataaaatc  
 1200  
 aactaatcaa aaatgaaaaa aaaaaaa  
 1227

&lt;210&gt; 5692

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5692

Lys	Arg	Lys	Asn	Asn	Cys	His	Gly	Asn	His	Ile	Glu	Met	Gln	Ala	Met
1			5					10					15		
Ala	Glu	Met	Tyr	Asn	Arg	Pro	Val	Glu	Val	Tyr	Gln	Tyr	Ser	Thr	Glu
			20					25					30		
Pro	Ile	Asn	Thr	Phe	His	Gly	Ile	His	Gln	Asn	Glu	Asp	Glu	Pro	Ile
		35					40					45			
Arg	Val	Ser	Tyr	His	Arg	Asn	Ile	His	Tyr	Asn	Ser	Val	Val	Asn	Pro
	50					55					60				
Asn	Lys	Ala	Thr	Ile	Gly	Val	Gly	Leu	Gly	Cys	His	His	Ser	Asn	Gln
65				70					75					80	
Gly	Leu	Gln	Ser	Ser	Leu										
				85											

&lt;210&gt; 5693

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5693

nacgcgtgtg ggatacccct tcgcggggac agccaggcag aaagacgctg ctcctcctcg  
 60  
 gacactgggg cacctctgcg cctgtcccaa ggccacgctg gctctcttca ggcccatggc  
 120  
 tcccaacccc cagggcccct cgtcggggcg tcccaactta gtcgtcccct gacgcggcct  
 180  
 ctgggcccct ccgggttggg gagctgacgg cagcttcccc ccacagggtgc ctctgagcct  
 240  
 cggaacatga tctacatgag ccgcttgggt atctggggcg agggcacacc cttccggaac  
 300

tttgaggagt tcctgcacgc catcgagaag aggggcgttg gcgccatgga gatcgtggcc  
360

atggacatga aggtcagcgg gcatgtaca  
389

<210> 5694

<211> 60

<212> PRT

<213> Homo sapiens

<400> 5694

Arg	Gln	Leu	Pro	Pro	Thr	Gly	Ala	Ser	Glu	Pro	Arg	Asn	Met	Ile	Tyr
1			5						10				15		
Met	Ser	Arg	Leu	Gly	Ile	Trp	Gly	Glu	Gly	Thr	Pro	Phe	Arg	Asn	Phe
		20					25				30				
Glu	Glu	Phe	Leu	His	Ala	Ile	Glu	Lys	Arg	Gly	Val	Gly	Ala	Met	Glu
	35					40					45				
Ile	Val	Ala	Met	Asp	Met	Lys	Val	Ser	Gly	His	Val				
	50					55					60				

<210> 5695

<211> 1417

<212> DNA

<213> Homo sapiens

<400> 5695

gtggccctcc accgggtcatt gaagcctcaa ggtcagggtg gtagcagga ggaggctggt  
60  
gccttgccggc aagccctaac cttttccctg ttggagcagc ccccggtgga ggcagaagag  
120  
ccccagata gggggactga tggcaaggcc cagctggtgg tgcactcggc ctttgagcag  
180  
gatgtggagg agctggaccg ggcgctcagg gctgccttgg aggtccacgt ccaggaggag  
240  
acgggtggggc cctggcgccg cacactgcct gcagagctgc gtgctcgctt ggagcgggtg  
300  
catggtgtga gtgttgccct gcgtggtgac tgcaccatcc tccgtggctt cggggccac  
360  
cctgcccgtg ctgcccgccca cttggtggca cttctggtg gccctggga tcagagtttg  
420  
gcctttccct tggcagcttc aggcctacc ttggcggggc agacgctgaa ggggccctgg  
480  
aacaacctgg agcgtctggc agagaacacc ggggagttcc aggaggtggt gcgggccttc  
540  
tacgacaccc tggacgctgc ccgcagcagc atccgcgtcg ttcgtgtgga gcgcgtgtcg  
600  
caccgctgc tgcagcagca gtatgagctg taccgggagc gctgctgca gcgatgagag  
660  
cggcgcccg tggagcaggt gctgtaccac ggcacgacgg caccggcagt gctgacatc  
720  
tgcgcccacg gcttcaaccg cagcttctgc ggccgcaacg ccacggtcta cgggaagggc  
780  
gtgtatttgc ccaggcgcg ctcctgtcg gtgcaggacc gctactcgcc ccccaacgcc  
840

gatggccata aggcgggtgtt cgtggcacgg gtgctgactg gcgactacgg gcagggccgc  
 900  
 cgcggtctgc gggcgcccc tctgcggggt cctggccacg tgctcctgcg ctacgacagc  
 960  
 gccgtggact gcattctgcca gccagcatc ttctcatct tccacgacac ccaggcgctg  
 1020  
 cccaccacc tcattcacctg cgagcacgtg ccccgcgctt ccccgacga cccctctggg  
 1080  
 ctcccgggcc gctccccaga cacttaaccg aagggggccac cctctggcct cctgcttccc  
 1140  
 aggctccag ctccgcacag gctgatgtc cccgccccca actgtggccg cctgagctgt  
 1200  
 ccccggggac gccctgcat cctctgcgg gctccagaag gcggtgtggg ggatggcggt  
 1260  
 cagcagcggc cgaggggggc cgggctaggt cccagcctgg gccgaccca ccaccagggg  
 1320  
 tcagcagagc ccaggagcga caccgcccgc ccgcgctcc cagacctcgc ccgagtcggc  
 1380  
 tctgttgttt gaataaacgt gaacgtgaac ccagaaa  
 1417

&lt;210&gt; 5696

&lt;211&gt; 368

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5696

Val	Ala	Leu	His	Arg	Ser	Leu	Lys	Pro	Gln	Gly	Gln	Val	Gly	Glu	Gln
1				5					10					15	
Glu	Glu	Ala	Gly	Ala	Leu	Arg	Gln	Ala	Leu	Thr	Phe	Ser	Leu	Leu	Glu
			20					25					30		
Gln	Pro	Pro	Leu	Glu	Ala	Glu	Glu	Pro	Pro	Asp	Arg	Gly	Thr	Asp	Gly
		35					40					45			
Lys	Ala	Gln	Leu	Val	Val	His	Ser	Ala	Phe	Glu	Gln	Asp	Val	Glu	Glu
	50					55				60					
Leu	Asp	Arg	Ala	Leu	Arg	Ala	Ala	Leu	Glu	Val	His	Val	Gln	Glu	Glu
65					70				75					80	
Thr	Val	Gly	Pro	Trp	Arg	Arg	Thr	Leu	Pro	Ala	Glu	Leu	Arg	Ala	Arg
			85					90					95		
Leu	Glu	Arg	Cys	His	Gly	Val	Ser	Val	Ala	Leu	Arg	Gly	Asp	Cys	Thr
			100					105					110		
Ile	Leu	Arg	Gly	Phe	Gly	Ala	His	Pro	Ala	Arg	Ala	Ala	Arg	His	Leu
	115						120						125		
Val	Ala	Leu	Leu	Ala	Gly	Pro	Trp	Asp	Gln	Ser	Leu	Ala	Phe	Pro	Leu
	130					135					140				
Ala	Ala	Ser	Gly	Pro	Thr	Leu	Ala	Gly	Gln	Thr	Leu	Lys	Gly	Pro	Trp
145					150				155					160	
Asn	Asn	Leu	Glu	Arg	Leu	Ala	Glu	Asn	Thr	Gly	Glu	Phe	Gln	Glu	Val
				165				170						175	
Val	Arg	Ala	Phe	Tyr	Asp	Thr	Leu	Asp	Ala	Ala	Arg	Ser	Ser	Ile	Arg
			180				185						190		
Val	Val	Arg	Val	Glu	Arg	Val	Ser	His	Pro	Leu	Leu	Gln	Gln	Gln	Tyr
		195					200						205		
Glu	Leu	Tyr	Arg	Glu	Arg	Leu	Leu	Gln	Arg	Cys	Glu	Arg	Arg	Pro	Val

210	215	220
Glu Gln Val Leu Tyr His Gly Thr Thr Ala Pro Ala Val Pro Asp Ile		
225	230	235
Cys Ala His Gly Phe Asn Arg Ser Phe Cys Gly Arg Asn Ala Thr Val		240
	245	250
Tyr Gly Lys Gly Val Tyr Phe Ala Arg Arg Ala Ser Leu Ser Val Gln		255
	260	265
Asp Arg Tyr Ser Pro Pro Asn Ala Asp Gly His Lys Ala Val Phe Val		270
	275	280
Ala Arg Val Leu Thr Gly Asp Tyr Gly Gln Gly Arg Arg Gly Leu Arg		285
	290	295
Ala Pro Pro Leu Arg Gly Pro Gly His Val Leu Leu Arg Tyr Asp Ser		300
305	310	315
Ala Val Asp Cys Ile Cys Gln Pro Ser Ile Phe Val Ile Phe His Asp		320
	325	330
Thr Gln Ala Leu Pro Thr His Leu Ile Thr Cys Glu His Val Pro Arg		335
	340	345
Ala Ser Pro Asp Asp Pro Ser Gly Leu Pro Gly Arg Ser Pro Asp Thr		350
	355	360
		365

&lt;210&gt; 5697

&lt;211&gt; 3362

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5697

gtatccaatt caaagaatac aaaagggtat acagagaagt tggcctccct cctaccctgt  
 60  
 ccttcagcca ccagtgatga tgattcacgg ttcttctactg caccagcca agggtagaga  
 120  
 tgggtcccaa aacctccgtg cctgaggaaa ggagcacgtt ttcctatgtg tgcaaagggtg  
 180  
 ccatgtgcgc ttgcagggtt gaaatgaggc gagtcttctt caagaagtca ggagaggggg  
 240  
 agtcttccaa tgaattcatc ttctcttccc cccaaccatt cccctcttgg cttttctaga  
 300  
 atgttcgtgg catcagagag aaagatgaga gctcaccagg tgctcacctt cctctgctc  
 360  
 ttctgatca cctcggtggc ctctgaaaac gccagcacat cccgaggctg tgggctggac  
 420  
 ctctccctc agtacgtgtc cctgtgcgac ctggacgcca tctggggcat tgtggtggag  
 480  
 gcggtggcgc gggcgggcgc cctgatcaca ctgctcctga tgctcatcct cctggtgcgc  
 540  
 ctgcccttca tcaaggagaa ggagaagaag agcctgtgg gcctccactt tctgttcctc  
 600  
 ctggggaccc tgggcctctt tgggctgacg tttgccttca tcatccagga ggacgagacc  
 660  
 atctgctctg ttgcgcgctt cctctggggc gtctcttttg cgtctgctt ctctgctg  
 720  
 ctgagccagg catggcgcgt gcggaggctg gtgcggcatg gcacgggccc cgcgggctgg  
 780  
 cagctggtgg gcctggcgt gtgcctgatg ctggtgcaag tcatcatcgc tgtggagtgg  
 840

ctggtgctca ccgtgctgcg tgacacaagg ccagcctgcg cctacgagcc catggacttt  
900  
gtgatggccc tcattctacga catggtactg cttgtggtca ccctggggct ggcctcttc  
960  
actctgtgcg gcaagttcaa gaggtggaag ctgaacgggg ccttcctcct catcacagcc  
1020  
ttcctctctg tgctcatctg ggtggcctgg atgaccatgt acctcttcgg caatgtcaag  
1080  
ctgcagcagg gggatgcctg gaacgacccc accttggcca tcacgctggc ggccagcggc  
1140  
tgggtcttcg tcattctcca cgccatccct gagatccact gcacccttct gccagccctg  
1200  
caggagaaca cgccaacta cttcgacacg tcgcagccca ggatgcggga gacggccttc  
1260  
gaggaggacg tgcagctgcc gggggcctat atggagaaca aggccttctc catggatgaa  
1320  
cacaatgcag ctctccgaac agcaggattt cccaacggca gcttgggaaa aagaccagt  
1380  
ggcagcttgg ggaaaagacc cagcgctccg tttagaagca acgtgtatca gccaaactgag  
1440  
atggccgctg tgctcaacgg tgggaccatc ccaactgctc cgccaagtca cacaggaaga  
1500  
cacctttggt gaaagacttt aagttccaga gaatcagaat ttctcttacc gatttgcttc  
1560  
cctggctgtg tctttcttga gggagaaatc ggtaacagtt gccgaaccag gccgcctcac  
1620  
agccaggaaa tttggaaatc ctagccaagg ggatttcgtg taaatgtgaa cactgacgaa  
1680aacaccgact gccgcccct cccctgccac acacacagac acgtaatacc 1740  
agaccaacct caatccccgc aaactaaagc aaagctaatt gcaaatagta ttaggctcac  
1800  
tggaaaatgt ggctgggaag actgtttcat cctctggggg tagaacagaa ccaaattcac  
1860  
agctgggtgg ccagactggt gttggttga ggtggggggc tcccactctt atcacctctc  
1920  
cccagcaagt gctggacccc aggtagcctc ttggagatga ccgttgcgtt gaggacaaat  
1980  
ggggactttg ccaccggctt gcctggtggt ttgcacattt caggggggtc aggagagtta  
2040  
aggaggttgt ggggtgggatt ccaaggtgag gcccaactga atcgtggggg gagctttata  
2100  
gccagtagag gtggagggac cctggcatgt gccaaagaag aggcctctg ggtgatgaag  
2160  
tgaccatcac atttggaaag tgatcaacca ctgttccttc tatggggctc ttgctctagt  
2220  
gtctatggtg agaacacagg ccccgcccct tccctttag agccatagaa atattctggc  
2280  
ttggggcagc agtcccttct tcccttgatc atctcgccct gttcctacac ttacgggtgt  
2340  
atctccaaat cctctcccaa tttattccc ttattcattt caagagctcc aatggggctc  
2400  
ccagctgaaa gccctccgg gaggcagggt ggaaggcagg caccacggca ggttttccgc  
2460  
gatgatgtca cctagcaggg cttcaggggt tccactagg atgcagagat gacctctcgc  
2520

tgcctcacia gcagtacac ctcgggtcct ttccgttgct atggtgaaaa ttcctggatg  
 2580  
 gaatggatca catgaggggt tcttgttgct tttggaggggt gtgggggata ttttgttttg  
 2640  
 gtttttctgc aggttccatg aaaacagccc tttccaagc ccattgtttc tgtcatgggt  
 2700  
 tccatctgtc ctgagcaagt cattcctttg ttatttagca ttcgaacat ctcggccatt  
 2760  
 caaagccccc atgttctctg cactgttttg ccagcataac ctctagcacc gattcaaagc  
 2820  
 agagttttta cctgacggca tggaatgtat aaatgaggggt gggtccttct gcagatactc  
 2880  
 taatcactac attgcttttt ctataaaact acccataagc ctttaacctt taaagaaaaa  
 2940  
 tgaaaaaggt tagtgtttgg gggccggggg aggactgacc gcttcataag ccagtacgtc  
 3000  
 tgagctgagt atgtttcaat aaaccttttg atatttctca aggccttagt ctctgctgtc  
 3060  
 tccctcccc accccatcct tgcaaagcac tggggaaagt aaggccaatc tggccctccc  
 3120  
 tgtgtgaccc gccttcgagt tttccttaac agttagtaca tttccttggt ttaccacgca  
 3180  
 cggggaagaa aacgcattggc cccagaatgc cccccacc tgacctcccc ggaagcacc  
 3240  
 cgcctctgcc cagagcatgt gcttgcttct agagaatccc gttccagtca ttgcgtggac  
 3300  
 agaaaacgta agagtcttgg ggaggggtgg gagggaatga agctaggacc tggggtcggg  
 3360  
 gt  
 3362

&lt;210&gt; 5698

&lt;211&gt; 403

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5698

Met	Phe	Val	Ala	Ser	Glu	Arg	Lys	Met	Arg	Ala	His	Gln	Val	Leu	Thr
1				5				10					15		
Phe	Leu	Leu	Leu	Phe	Val	Ile	Thr	Ser	Val	Ala	Ser	Glu	Asn	Ala	Ser
		20						25					30		
Thr	Ser	Arg	Gly	Cys	Gly	Leu	Asp	Leu	Leu	Pro	Gln	Tyr	Val	Ser	Leu
		35					40					45			
Cys	Asp	Leu	Asp	Ala	Ile	Trp	Gly	Ile	Val	Val	Glu	Ala	Val	Ala	Gly
		50				55				60					
Ala	Gly	Ala	Leu	Ile	Thr	Leu	Leu	Leu	Met	Leu	Ile	Leu	Leu	Val	Arg
65					70					75				80	
Leu	Pro	Phe	Ile	Lys	Glu	Lys	Glu	Lys	Lys	Ser	Pro	Val	Gly	Leu	His
			85						90					95	
Phe	Leu	Phe	Leu	Leu	Gly	Thr	Leu	Gly	Leu	Phe	Gly	Leu	Thr	Phe	Ala
			100					105					110		
Phe	Ile	Ile	Gln	Glu	Asp	Glu	Thr	Ile	Cys	Ser	Val	Arg	Arg	Phe	Leu
			115				120					125			
Trp	Gly	Val	Leu	Phe	Ala	Leu	Cys	Phe	Ser	Cys	Leu	Leu	Ser	Gln	Ala



130	135	140
Trp Arg Val Arg Arg	Leu Val Arg His Gly Thr	Gly Pro Ala Gly Trp
145	150	155
Gln Leu Val Gly Leu Ala	Leu Cys Leu Met Leu Val	Gln Val Ile Ile
165	170	175
Ala Val Glu Trp Leu Val	Leu Thr Val Leu Arg Asp Thr	Arg Pro Ala
180	185	190
Cys Ala Tyr Glu Pro Met	Asp Phe Val Met Ala Leu Ile	Tyr Asp Met
195	200	205
Val Leu Leu Val Val Thr	Leu Gly Leu Ala Leu Phe	Thr Leu Cys Gly
210	215	220
Lys Phe Lys Arg Trp Lys	Leu Asn Gly Ala Phe Leu	Leu Ile Thr Ala
225	230	235
Phe Leu Ser Val Leu Ile	Trp Val Ala Trp Met Thr	Met Tyr Leu Phe
245	250	255
Gly Asn Val Lys Leu Gln	Gln Gly Asp Ala Trp Asn	Asp Pro Thr Leu
260	265	270
Ala Ile Thr Leu Ala Ala	Ser Gly Trp Val Phe Val	Ile Phe His Ala
275	280	285
Ile Pro Glu Ile His Cys	Thr Leu Leu Pro Ala Leu	Gln Glu Asn Thr
290	295	300
Pro Asn Tyr Phe Asp Thr	Ser Gln Pro Arg Met Arg	Glu Thr Ala Phe
305	310	315
Glu Glu Asp Val Gln Leu	Pro Arg Ala Tyr Met Glu	Asn Lys Ala Phe
325	330	335
Ser Met Asp Glu His Asn	Ala Ala Leu Arg Thr Ala	Gly Phe Pro Asn
340	345	350
Gly Ser Leu Gly Lys Arg	Pro Ser Gly Ser Leu Gly	Lys Arg Pro Ser
355	360	365
Ala Pro Phe Arg Ser Asn	Val Tyr Gln Pro Thr Glu	Met Ala Val Val
370	375	380
Leu Asn Gly Gly Thr Ile	Pro Thr Ala Pro Pro Ser	His Thr Gly Arg
385	390	395
His Leu Trp		400

&lt;210&gt; 5699

&lt;211&gt; 1565

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5699

tttttttttt tttttttttt tttttttttt ttttttcata gtgaaaccat tttctagaaa  
60

atcaaatatt ttattttcat taaaaaaaaa cttgaataa taggaatcat tttacacatt  
120

aatggttgct ctttaaaagt tagaatctca agagatacca aaagcactta agagttacca  
180

ccacattttg cccaagttct aaggaaagtt ctgaaactta gtggtggtgt gtttgacttc  
240

agcaagctcc agacagtctg agttgctcat tccatgaaca gaagcttgaa aatgccctta  
300

cagttgagat ataaacgagg gaagaggtga agctttcagg aagccagaga gccctgccc  
360

gtcagggttct ctgaggaagg caggggtgct ctatgctcat cagtcattca agcttctcag  
 420  
 gaaatgtgcc catcatggga acagcagcta tcttccaagc ttaaaaatta tgaatcccag  
 480  
 gaagttaaag cccaaccagc caaccacctt cacatccttc tcatactagt agagtcattc  
 540  
 aaaacagcaa gtggtgcttc tgaggcagcc tcaggaaggt ctttgggtgg ctattctaga  
 600  
 ggtgaacata ctggaaaggt ttttacctaa agcattttca gttgaaatga aaaaagaagg  
 660  
 aaagctccaa aagtcagttt caaattcttt cagtgtctgt cccagagaag tccgtgtgca  
 720  
 aaggtgtgat gttctgggtca taagcggcat actcagaggt gccggtactg gccagcttga  
 780  
 gctgtgggc agcatgggtc agctggaatg cagcatcagg gtgggtgtc tcaggcagca  
 840  
 gtgtgcattc cctttccagc atgtcagcca cccctttcag caggtccagg aaaccaagg  
 900  
 ctagagcggc ctttcgcaaa cggttcagct ccttatagaa tgtctgtgtt ttttcaggta  
 960  
 gtttccttgc atttcttaaa atcttctgta catctgtctg caggccgctg ggtttgatcc  
 1020  
 agacagtcac attctgggca taactgcgtt tgtttttggg ctgtaggggg aatggactct  
 1080  
 tattgtcatc ctgcataa gggttttctt tagcatctga aataggacc aactgtgcca  
 1140  
 ttttccttag ccatgggaga ggttctgggc caggctcaaa gagagacatc atgaggtttg  
 1200  
 atttcttctt gctgtcagct tgggagtaga gcattccatg ccattcagga cctaattgaa  
 1260  
 caatcgctac cattccttcc acttttaggc taccatggag caggacacaa aagttgggta  
 1320  
 tttgcctgc aatctgattg gctgaattct catcttcatt gtcacagtg atgccagcac  
 1380  
 ccacctcatc accttctttg ttaagtgtc tgggcaagac cagatgcctg gacagaactg  
 1440  
 ggggacttga aatatcagct atatcaataa atcccactat ttccaaatct gtgttaatga  
 1500  
 ctttagggat aggatcaatt tcttcactca caacaaaagg ttctggcctg gggaagactt  
 1560  
 gtacc  
 1565

&lt;210&gt; 5700

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5700

Met Val Ala Ile Val Gln Leu Gly Pro Glu Trp His Gly Met Leu Tyr  
 1 5 10 15  
 Ser Gln Ala Asp Ser Lys Lys Lys Ser Asn Leu Met Met Ser Leu Phe  
 20 25 30  
 Glu Pro Gly Pro Glu Pro Leu Pro Trp Leu Gly Lys Met Ala Gln Leu

35	40	45
Gly Pro Ile Ser Asp Ala Lys Glu Asn Pro Tyr Gly Glu Asp Asp Asn		
50	55	60
Lys Ser Pro Phe Pro Leu Gln Pro Lys Asn Lys Arg Ser Tyr Ala Gln		
65	70	75
Asn Val Thr Val Trp Ile Lys Pro Ser Gly Leu Gln Thr Asp Val Gln		
85	90	95
Lys Ile Leu Arg Asn Ala Arg Lys Leu Pro Glu Lys Thr Gln Thr Phe		
100	105	110
Tyr Lys Glu Leu Asn Arg Leu Arg Lys Ala Ala Leu Ala Phe Gly Phe		
115	120	125
Leu Asp Leu Leu Lys Gly Val Ala Asp Met Leu Glu Arg Glu Cys Thr		
130	135	140
Leu Leu Pro Glu Thr Ala His Pro Asp Ala Ala Phe Gln Leu Thr His		
145	150	155
Ala Ala Gln Gln Leu Lys Leu Ala Ser Thr Gly Thr Ser Glu Tyr Ala		
165	170	175
Ala Tyr Asp Gln Asn Ile Thr Pro Leu His Thr Asp Phe Ser Gly Ser		
180	185	190
Ser Thr Glu Arg Ile		
195		

&lt;210&gt; 5701

&lt;211&gt; 1885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5701

```

gccttgacaca tggagatgct tagctgaggg ggtggctttg ttagactatt tgcaggctgt
60
gagatagagc ctgagatggg ggactgggccc cctgacctggg ggattgggtc gtgacctgtg
120
tggagcccca cactgagctg cagtgggtgg ggagggtggt ttacaggggt gctctgtgca
180
gcccctctga ttttcccctg ggagtccag gtccagggga aggaggacag tggcccaggg
240
cacacagctc actggggggc tctcactccc ccagggtctg ctgctggcgg gatggacacc
300
ctggaggagg tgacttgggc caatgggagc acagcgctac cccacccct ggcaccaaac
360
atcagtgtgc ctcactgctg cctgtgtctg ctctacgaag acattggcac ctccagggtc
420
cggtaactggg acctcttctg gtcactccc aatgtgtctt tctcatctt cctgctctgg
480
aagcttccat ctgctcgggc gaagatccgc atcacctcca gcccatttt tatcaccttc
540
tacatcctgg tgtttgtggt ggcgtgtgtg ggcattgccc gggccgtggt atccatgacg
600
gtgagcacct cgaacgctgc aactgttctg gataagatcc tgtgggagat caccgcttc
660
ttcctgctgg ccactgagct gactgtgatc atcctgggccc tggcctttgg ccacctggag
720
agtaagtcca gcatcaagcg ggtgtgtggc atcaccacag tgctgtccct ggcctactct
780

```

gtcacccagg ggaccctgga gatcctgtac cctgatgccc atctctcagc tgaggacttt  
 840  
 aatatctatg gccatggggg ccgccagttc tggctggcca gctcctgctt cttcttctg  
 900  
 gtctactctc tgggtggcat ccttcccaag accccgctga aggagcgcac ctccctgcct  
 960  
 tctcggagga gcttctacgt gtatgcgggc atcctggcac tgctcaacct actgcagggg  
 1020  
 ctggggagtg tgetgctgtg cttcgacatc atcgaggggc tctgctgtgt agatgccaca  
 1080  
 accttctgt acttcagctt cttcgctccg ctcatctacg tggctttcct ccggggcttc  
 1140  
 ttcggctcgg agcccaagat cctcttctc ctacaaatgc caagtggacg agacagagga  
 1200  
 gccagatgta cacctacccc agcctacgc tgtggcccg cgaggaggcc tggaggctgc  
 1260  
 aggggctgct ggggcctcag ctgccagcta ctcgagcacg cagttcgact ctgccggcgg  
 1320  
 ggtggcctac ctggatgaca tcgcttccat gccctgccac actggcagca tcaacagcac  
 1380  
 agacagcgag cgctggaagg ccatcaatgc ctgagggcag ctgccagggc ctgtggagga  
 1440  
 caggccagag aggaggccag caggcccaga gtccccaggg gaggaggacc aggtcaaggg  
 1500  
 acgttctgtg ggcagtagcc ctgtgtggcc ctgttccac catgagtctg gaggccccac  
 1560  
 ctccctgggg ctcccaatcc cctttgccat ctctgtctc actggggacc ctctccct  
 1620  
 tcccacctgc tctcactctg ctcatgaca tggcccaggc tttcttcca gggccatgct  
 1680  
 tggcaagggt ggctgagggc accctcctc tctgcacct tggcacgagg gcagggctgg  
 1740  
 ctctcccaat gctccatcc catcccatg gtgctttggc ctctcaaag catccaccat  
 1800  
 ggtggatgga ctgaagtgtg tatattttct tgatctattt ttaataaaa aggaaaagga  
 1860  
 gcagaaaaaa aaaaaaaaaaag ttttg  
 1885

&lt;210&gt; 5702

&lt;211&gt; 348

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5702

Met	Asp	Thr	Leu	Glu	Glu	Val	Thr	Trp	Ala	Asn	Gly	Ser	Thr	Ala	Leu
1				5					10					15	
Pro	Pro	Pro	Leu	Ala	Pro	Asn	Ile	Ser	Val	Pro	His	Arg	Cys	Leu	Leu
			20					25				30			
Leu	Leu	Tyr	Glu	Asp	Ile	Gly	Thr	Ser	Arg	Val	Arg	Tyr	Trp	Asp	Leu
		35				40					45				
Leu	Leu	Leu	Ile	Pro	Asn	Val	Leu	Phe	Leu	Ile	Phe	Leu	Leu	Trp	Lys
		50				55					60				
Leu	Pro	Ser	Ala	Arg	Ala	Lys	Ile	Arg	Ile	Thr	Ser	Ser	Pro	Ile	Phe

65                                      70                                      75                                      80  
 Ile Thr Phe Tyr Ile Leu Val Phe Val Val Ala Leu Val Gly Ile Ala  
    85                                      90                                      95  
 Arg Ala Val Val Ser Met Thr Val Ser Thr Ser Asn Ala Ala Thr Val  
    100                                      105                                      110  
 Ala Asp Lys Ile Leu Trp Glu Ile Thr Arg Phe Phe Leu Leu Ala Ile  
    115                                      120                                      125  
 Glu Leu Ser Val Ile Ile Leu Gly Leu Ala Phe Gly His Leu Glu Ser  
    130                                      135                                      140  
 Lys Ser Ser Ile Lys Arg Val Leu Ala Ile Thr Thr Val Leu Ser Leu  
 145                                      150                                      155                                      160  
 Ala Tyr Ser Val Thr Gln Gly Thr Leu Glu Ile Leu Tyr Pro Asp Ala  
    165                                      170                                      175  
 His Leu Ser Ala Glu Asp Phe Asn Ile Tyr Gly His Gly Gly Arg Gln  
    180                                      185                                      190  
 Phe Trp Leu Val Ser Ser Cys Phe Phe Phe Leu Val Tyr Ser Leu Val  
    195                                      200                                      205  
 Val Ile Leu Pro Lys Thr Pro Leu Lys Glu Arg Ile Ser Leu Pro Ser  
    210                                      215                                      220  
 Arg Arg Ser Phe Tyr Val Tyr Ala Gly Ile Leu Ala Leu Leu Asn Leu  
 225                                      230                                      235                                      240  
 Leu Gln Gly Leu Gly Ser Val Leu Leu Cys Phe Asp Ile Ile Glu Gly  
    245                                      250                                      255  
 Leu Cys Cys Val Asp Ala Thr Thr Phe Leu Tyr Phe Ser Phe Phe Ala  
    260                                      265                                      270  
 Pro Leu Ile Tyr Val Ala Phe Leu Arg Gly Phe Phe Gly Ser Glu Pro  
    275                                      280                                      285  
 Lys Ile Leu Phe Xaa Leu Gln Met Pro Ser Gly Arg Asp Arg Gly Ala  
    290                                      295                                      300  
 Arg Cys Thr Pro Thr Pro Ala Leu Arg Cys Gly Pro Ala Gly Gly Pro  
 305                                      310                                      315                                      320  
 Gly Gly Cys Arg Gly Cys Trp Gly Leu Ser Cys Gln Leu Leu Glu His  
    325                                      330                                      335  
 Ala Val Arg Leu Cys Arg Arg Gly Gly Leu Pro Gly  
    340                                      345

&lt;210&gt; 5703

&lt;211&gt; 1496

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5703

nggctcacca cacggcaagg tgcccgttc caagctgacc ccaccagcac tcagacacgc

60

atgcacacac acacgcagac ctactatgaa ctggcttggtg ctcagcaaga gcagaattga

120

tgagcagata ccttaagaat cttttagagc aggaccacgt acaagggcaa atcctccttc

180

cagacctact cggactacct gcgtgggag agcttctctc agcagcagct gcaggccttg

240

cccgagggct cagtccctgcg ccggggcttc cagacctgcg agcactggaa gcagatatc

300

atggaaatcg taggggtgca gaggccctg tgcggcctgg tgctatccct gctcatctgc

360

gtggccgcgg tggccgtgtt caccacccac atcctgctcc tgctgcccgt gctcctcagc  
 420  
 atcttgggca tcgtgtgcct ggtggtgacc atcatgtact ggagcggctg ggagatgggg  
 480  
 gctgtggaag ccattccctt gtccatcctc gttggctcct ccgtggatta ctgcgtccac  
 540  
 ctggtcgagg gctacctgct ggctggagag aacctgcccc cccaccaggc cgaggacgcc  
 600  
 cgaacgcagc gccagtggcg tacgctggag gccgtgcggc acgtgggcgt ggccatcgct  
 660  
 tccagtcccc tcaccacggt catcgccaca gtgcccctct tcttctgcat catcgcccca  
 720  
 tttgccaagt tcggcaagat tgtggcactc aacacgggcg tgtccatcct ctacacgctg  
 780  
 accgtcagca ccgcccctgct gggcatcatg gcgcccagct ctttcaactcg gaccgggact  
 840  
 tccttctca aggccctggg tgccgtgctg ctggcagggg cctgggggct ggggtgctcg  
 900  
 ctctgctcc tgacagcgg ctataagatt cccctgcccg caggggcctc cctatagccc  
 960  
 gggacgggct ctggacactt gcaccttgg tcccatgggt gggggacagg agctgcttcc  
 1020  
 cagctcgact tcagctagct gtgtccccag gcctgggccc agggcgccct gggggccagc  
 1080  
 gtggaggctg acacccacac agatggtgtg gaccatgctg ccttgtggag ctgggagtgtg  
 1140  
 gagacagcgg ccaccccaaca ggccgggcta ctggcagcca cactcggtt tttgccagt  
 1200  
 ggcagaagag accagccctc ctcccatgcc cggtcaccat gggggtcagg ttatttttgt  
 1260  
 aggggggtct cctctcacac tgcctcagtg ctcaaacct tccagtgtgg atgttacagg  
 1320  
 gtggccccca ttctaccgat gtgaaaactg aggcgccagg acacagtggc tgccctgtcg  
 1380  
 ctggatcagt agcagagcca gagctgcctc cgagcgccat gccgccctcg ggaatcatac  
 1440  
 aggaagagca cagtggatcc aggggtgggg cctctcacc cctaaccgccc cccccc  
 1496

&lt;210&gt; 5704

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5704

Ser Arg Thr Thr Tyr Lys Gly Lys Ser Ser Phe Gln Thr Tyr Ser Asp  
 1 5 10 15  
 Tyr Leu Arg Trp Glu Ser Phe Leu Gln Gln Gln Leu Gln Ala Leu Pro  
 20 25 30  
 Glu Gly Ser Val Leu Arg Arg Gly Phe Gln Thr Cys Glu His Trp Lys  
 35 40 45  
 Gln Ile Phe Met Glu Ile Val Gly Val Gln Ser Ala Leu Cys Gly Leu  
 50 55 60  
 Val Leu Ser Leu Leu Ile Cys Val Ala Ala Val Ala Val Phe Thr Thr

```
<210> 5705
<211> 768
<212> DNA
<213> Homo sapiens
```

```

<400> 5705
ntggagccgc tgagcccccg ctgcgggccgg gagctgcatg ggggagcgcg ggccaggctc
60
gggaagatgc ccgggccgga gttgcccttg ccggagggct gggaggaggc gcgcgacttc
120
gacggcaagg tctactacat agaccacacg aaccgcacca ccagctggat cgaccgcggy
180
gacaggtaca ccaaaccact cacctttgct gactgcatta gcgacgagtt gccgctggga
240
tggaagagg catatgacct acaggttggg gattacttca tagaccacaa taccaaaacc
300
actcagattg aggatccaag ggtgcaatgg cggcggggagc aggaacatat gctgaaggat
360
tacctggtgg tggcccagga ggctctgagt gcacaaaagg agatctacca ggtgaagcag
420
cagcgcttgg agcttgacac gcaggagtac cagcaactgc atgccgtctg ggagcataag
480
ctgggctccc aggtcagctt ggtctctggt tcatcatcca gctccaagta tgaccctgag
540
atcctgaaag ctgaaattgc cactgcagtt caaagagcgt ggctttcaga ccctgaagaa
600
aatcgataag aaaatgtctg atgctcaggg cagctacaaa ctggatgaag ctcaggctgt
660

```

cttgagagaa acaaaagcca tcaaaaaggc tattacctgg agagtccgag tttcccgccta  
 720  
 ccgaaacatt acctggattt tagctcccag acagacatct cggaagac  
 768

<210> 5706

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5706

Xaa	Glu	Pro	Leu	Ser	Pro	Arg	Cys	Gly	Arg	Glu	Leu	His	Gly	Gly	Ala
1				5				10					15		
Arg	Ala	Arg	Leu	Gly	Lys	Met	Pro	Arg	Pro	Glu	Leu	Pro	Leu	Pro	Glu
			20					25					30		
Gly	Trp	Glu	Glu	Ala	Arg	Asp	Phe	Asp	Gly	Lys	Val	Tyr	Tyr	Ile	Asp
		35					40						45		
His	Thr	Asn	Arg	Thr	Thr	Ser	Trp	Ile	Asp	Pro	Arg	Asp	Arg	Tyr	Thr
		50				55					60				
Lys	Pro	Leu	Thr	Phe	Ala	Asp	Cys	Ile	Ser	Asp	Glu	Leu	Pro	Leu	Gly
65					70					75				80	
Trp	Glu	Glu	Ala	Tyr	Asp	Pro	Gln	Val	Gly	Asp	Tyr	Phe	Ile	Asp	His
				85					90					95	
Asn	Thr	Lys	Thr	Thr	Gln	Ile	Glu	Asp	Pro	Arg	Val	Gln	Trp	Arg	Arg
		100						105					110		
Glu	Gln	Glu	His	Met	Leu	Lys	Asp	Tyr	Leu	Val	Val	Ala	Gln	Glu	Ala
		115					120					125			
Leu	Ser	Ala	Gln	Lys	Glu	Ile	Tyr	Gln	Val	Lys	Gln	Gln	Arg	Leu	Glu
		130					135				140				
Leu	Ala	Gln	Gln	Glu	Tyr	Gln	Gln	Leu	His	Ala	Val	Trp	Glu	His	Lys
145					150					155				160	
Leu	Gly	Ser	Gln	Val	Ser	Leu	Val	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Lys
			165						170					175	
Tyr	Asp	Pro	Glu	Ile	Leu	Lys	Ala	Glu	Ile	Ala	Thr	Ala	Val	Gln	Arg
			180					185					190		
Ala	Trp	Leu	Ser	Asp	Pro	Glu	Glu	Asn	Arg						
		195					200								

<210> 5707

<211> 6988

<212> DNA

<213> Homo sapiens

<400> 5707

nnctcttggtg ctctctcteta gttttactga actgccagta ctttgaacac actttgtgct  
 60  
 ttttctctc caggtctttg tgcatactgt ttctctgccc tggaatactc ttctttctct  
 120  
 ttacctgact cgtttctgct cttacttcaa gtctcagatt ctaggaagct ttccatcaac  
 180  
 ctgctatcac tgggacgagt tggccatccc ctgtgcttct gtagctccta tgaaatcata  
 240  
 atagttgaaa tgtgatgttt aaatgtttac ttggcattct cctctactga actctaagct  
 300



ttgtgagggt agtgatggtg gctttgccta ttgttttgtt tcccttaaatt ctaaacgcag  
360  
tgcctggcac atagtagcct ccagtaaattg cttgtttaat gaacaaacaa acctgtgaag  
420  
tgagtgatag agtgcttagt ccccttcagt ttccaggatg gagagatgga gaataaggac  
480  
ctcacacaaa atcacacagt acttggtgga agaagctgag ctatgacctg ccttccttca  
540  
gaggaatgca ctttgctttg gaagatatga agaaattccc agtacattgt ctttcctatt  
600  
gggtctgtgt gagaacaggc tgatagatgc ctctgtgtca agctgagctc ccagactctg  
660  
atacaggctg gggatgatga gaagaaccag aggacgatca ctgtcaacctg tgcccacatg  
720  
gggaaagcat tcaaggttat gaatgaactg cggagtaaac agctgttgtg tgacgtgatg  
780  
attgtggcag aagatgtcga gatagaagcc caccgtgtgg tcttggcagc ctgcagcccc  
840  
tacttctgtg cgatgttcac aggtgacatg tctgagagta aagccaaaaa gatagaaatc  
900  
aaggacgtgg atgggcagac gctgagtaag ctgattgact acatctatac tgctgaaatc  
960  
gaggtgactg aagagaatgt ccagggtgctg ctcccggcag ccagcttgct gcagctcatg  
1020  
gatgttcggc agaactgctg tgacttctctg cagtctcagt tgcattccac caattgcctg  
1080  
ggcatccgtg cgtttgcaga tgtacacacc tgcactgacc ttctgcagca ggccaatgcc  
1140  
tacgcagagc agcactttcc agagggtgat ctaggagaag aatttcttag cctgagtctg  
1200  
gaccaggtgt gcagcttgat atccagcgac aagctgaccg tttcttcaga agagaagggt  
1260  
tttgaagctg tgatctcatg gatcaattat gagaaagaaa cccgtttaga gcacatggca  
1320  
aagctgatgg aacatgtccg acttctctc ttacctaggg actacctagt ccaaacgggt  
1380  
gaagaagaag ctttgataaa gaataacaac acctgtaaag acttctcat tgaggccatg  
1440  
aaataccatc tctccctct ggatcagaga ctattgatta agaaccacag gaccaagccc  
1500  
aggactccag tcagccttcc caaggctcatg attgtggttg gcggccaggc acccaaggca  
1560  
atccgcagtg tggagtgcta tgatttcgag gaggaccggt gggatcagat tgctgagctt  
1620  
ccttcagaa gatgcagagc aggtgtggtg ttcattggctg gccacgtgta tgccgtggga  
1680  
gggtttaatg gctcactgcg ggtgcggaca gtggatgtgt atgacggcgt gaaggaccag  
1740  
tggacgtcca ttgccagcat gcaggagcgc cggagcacac tgggcgcagc ggtgctcaat  
1800  
gacttgctct acgcagtggg aggttttgat ggcagtactg gcctagcatc ggtggaagcc  
1860  
tacagctaca agaccaacga gtggttcttt gtggccccga tgaacacgcg gcggagcagt  
1920

gtgggtgtgg gcgttggtga ggggaagcta tatgctgttg ggggttatga tggagcttcc  
1980  
cgccagtgtc tgagcactgt ggagcagtac aaccacagca ccaatgaatg gatatacgtg  
2040  
gcgacatga gcacccgccg cagtggcgca ggggttgag tgcttagcgg acagctgtac  
2100  
gccacaggtg ggcattgatg gcctttggtg aggaagagcg ttgaggttta cgatcctgga  
2160  
acaaatacct ggaagcaagt ggcagacatg aacatgtgcc ggcgcaacgc aggggtctgt  
2220  
gcagtaaatg ggctcctgta tgtggttgga ggggatgatg gatcctgcaa cttggcttcg  
2280  
gtggagtact acaatcctgt cactgacaaa tggacgtgc ttccaacgaa catgagcacg  
2340  
gggcggagct atgcaggtgt tgccgtgatt cacaagtcct tgtgaccaa actcctactg  
2400  
ccaggaggtg gaggaaggag cagggtctgc ctgtgactct gaacagcagg accttggtga  
2460  
ctggattcaa cttgcttggg agggctctgt ctgctgtgag aaccgctctc ctctgacttg  
2520  
gcagactggt gttgttcac gcagtggtga caccattacc caccctcggt cccctgaggt  
2580  
gctctggcct atgcctgag caaggggggt cttgacatcc ccaggcagca cctttgggct  
2640  
ttgttttggg gtttctacag ggacaataca gaccctggag tgtgtgtgtg tgtgtgtgtg  
2700  
tgtagaccat ggtgtttctc tatgtttctc taagttgggg ggtgagcgtg tgtgacagtc  
2760  
tactggattt ctttactact gatcctttcg ctgtgttaaa aatcaagtca cagagacctc  
2820  
tcttctggat ttgtcccatg gggacctga gactactaaa gctgctttct tctgaaggtc  
2880  
cagttggaca gtctgggaat gtccagaaat aaccagtga aggggcagtt ctctggccac  
2940  
accacttat gtactttaac tactgtgact ttgtctgcag aagagctgga aaattctcga  
3000  
agctgcaccg tgctctctgt gtgctagaat aagggacaaa tgggttcctt gtgcttctca  
3060  
gtcactggtt tttccttgag ttctctaca ggaagcagat gagaactgcc cagtcttcag  
3120  
gtttaggcca ttggtctttg atgtcataga ttccaggcct gggaggtggt atgtctcttc  
3180  
agctgggaaa actagctctt cagagaagcc tcgggtaaca ctgaaaaaca aaacaaaaa  
3240  
aaacaaaaac aggaaaaaaa caaaaaacca aagtggtaag gattcagttc ctgcctataa  
3300  
tgggtctcaga gagggctcta cttttaggtt ttcccaggac aggacagtcc ccatttatac  
3360  
ttattatccc agtttaatta ttcacagcac cccattttac tcagaagtgt tctggtctgg  
3420  
aggataaata agaggtcacc ctctccaga cccaaagata gatttgtgcc tgtgttggt  
3480  
ggggtcgtgt gtgattcaga tggacattgg atggcttcaa aggaatatac cactagagct  
3540

ggcccttggc actttgtgac agtgggtcaag tctgtetaat gtccttgtct tctttttctt  
3600  
gtgctttccc cctattccag ggtgtgcacc ctctcccaa cccccaagaa cccactact  
3660  
gctttccctg tgaggtagga gatatcagtg ggtcttggat ttgaggcttc ctaagatgtg  
3720  
cttgcathtt aaaaaggag cttggtgaga gctttgctaa ttcacaggta aaaattatta  
3780  
acaatagaac ttcaagcatc ttgaggagcg ggcatttgag ggggcatgga gtaatttgta  
3840  
tttaaaaaac cttaaagttg tgctgttctt aaactagcaa attgctcatg ctgaaatttc  
3900  
tggcataagc aggggaagtc ttgtgtctgg agaatagtct cataccttgc agtctgggac  
3960  
accctcccta ctttgagaat ccacctacag gaagccaagg aactttataa atcctgatgt  
4020  
tggacttctg atacgactgg gctacttcca agcaggtgct gcaggagatt ggcattcccc  
4080  
agccctgca gttagaaacc ccgaagtctt ccagccagt gagccacttt gtgtatttac  
4140  
tgtatattta ttgtgcccta aatgtgcaac tctcctaaag aaaaaacttc tctttctgat  
4200  
gttaagcaca tgttacttca acaagatgct tggagaacaa caaggtacc agaatttta  
4260  
gaagccttca gaagaggcta aaatatccag ctttggggga cctggaagaa atgtctccaa  
4320  
aggaagcaag gcatgtttta gttgagtgtc ctggtctcac tatgaagtgg ggatgactgt  
4380  
ggcttcataa ctctacctgg ctgtgggttg gaagctgatg gaatgagaaa tgcctttct  
4440  
ccttctctga ggaaattttg agacttgttt cgggtgtgtc gtgtgatggg gatgaggctg  
4500  
gggttgggat ctgatgtatg ccattcacag aagctctcaa ttccagatga taggtgaatt  
4560  
ccctgccctt ccccaccac tgagaagcta gactttcatg cgggagaggc tacttttatg  
4620  
tgtcgtcttc cggggaaggg tccctccact gaaagctagc cagtcatgtt ttctgttttt  
4680  
ggatttttgc aattggtttc acctcatgtc tccctcccta caaagcactg cctctactgg  
4740  
gcgtgctgcc aaggccatgt gcactccatc ctcatgtatc ctttttcacg gggaccagaa  
4800  
cactggtacg tcatcaccaa agccaatctg ctctagctgc ccacagatgc caccaaaacc  
4860  
tgctatctct tcatcaccag gtacgattct tttccacag tggacacagc aggtatttt  
4920  
ctagtttgtg ctgggtcact ggtagatgaa gcctcttact gcccactta ggggtggccac  
4980  
ggctgcttgt gaatgcagct ttgccagtgg catatctgtc atctgattgc ggtggtgaaa  
5040  
tgggaattgag gccaagggtt agaagcagcc gagacgccac ttggatactg atttgaacaa  
5100  
tgtagaagtc agattctgaa ttccaaagtt atttctcata agtaccat ggcattctct  
5160

catctacaaa gttgcagtat tatgcaaata aaactgacct cattttctgc tatgcaataa  
5220  
gaatacttaa ttctagttcc cgacaagcca gttgcaatat cccctaagat gctttttgag  
5280  
ctgtcttact ttgatatctg ttgtgtaacg tttgtatatt tctgagccag atcctttcaa  
5340  
agattgcctt ttataaaaat tgaagctata gcttttaggc taaaatttta acgtagatat  
5400  
ttttataaga ttttttttc aagagtttga atcgcttttt attgtccatg gtaatgaaat  
5460  
gttgtgttct ttgcatcatt cactctcaaa cgtagttcat gcctgtagct ctcttccttt  
5520  
tgtttctcac ccttcagaaa catatttttc agtagctcca ggtagatgag cctttttttt  
5580  
ttttttttta aataccatat tcaagggagt ctgctgaatt ttaaaacgca gtcactggtg  
5640  
tttcttgaat tgctagggac tgatgttatg ttcgactcag cacttgcccg tctgtattga  
5700  
ttgtgtcttt tttttttttt ttttgagtc tgccttctgt gggggtgagg ccgggctgtc  
5760  
tcgtggtggc tcccactgac gggcactgag cctggtaccc tgtggcatgg agaagcctca  
5820  
gggaaaggcc tgcccccca gcacatactc ccatagtgtc ctaggtccag ccgaccattc  
5880  
cttattctct tctatctcct tgttgatctg aagcttccaa tagcttgagg cctttgctgc  
5940  
tggtgatgc cctttttggg agcatcttgt ctctaacctt taaaagaggg gtcaatcctc  
6000  
atgatccctg tgtgttaagc atatgctttg cagggtgtca cactacactt acaacttget  
6060  
tcttgagcta tgtctctact ccaggctctg ttttgtgtat ttatctgcca tttgcatcat  
6120  
ggtttttaaa atttattatt attattatta ttgttgggac aggtgccatt taaattgcct  
6180  
ccatgctccc catttgccc tagctggatc aagttgggag gctgagcaaa ctcatattcc  
6240  
agttagttgg agtttttaaa ggctctgttt gcctggagaa gcaaggaggt tagaatgtaa  
6300  
tttttttaag cgtttgcact atttagagtc ctaagccct catgttcagc tgtgctgtgt  
6360  
ttctactgac caagcaggag agccagcagc acttcagca tttgggaatg gaagagattt  
6420  
cttctgtagt ggataattgc agcctcatag cccctgtgca gccttcgtca tgggactcag  
6480  
tgactcatgg atatagcacc agccatggca ggaatgcaca ggactgtggc atttgacga  
6540  
tcaaatcacc ctagtgccat gtttggttat gagattgtaa attattegct ccccgctct  
6600  
ccctccct cattttcagt ggcaatagag gaccttgtt gtacttcttg ttaatttgc  
6660  
atattatgtg taaaatgctt tcgttgaaag aaaactgaag acactgaatg tgtatgtctg  
6720  
tgtgggtgct ctgtccctgt ggtgtcata gccagtcaga cttgatcact gacacccctg  
6780

acaacatatt gcataggttaa gatcctcgat ctggtgttct ctgcgtggct gttagggact  
 6840  
 gtatatcttg taaaagaaca cttgtcacat gcttgatcag ttacagcaat agctgaagaa  
 6900  
 acatttcctc aaatgtatta ttttaacagg aatcatgttc taatttccca tcctttaatt  
 6960  
 ttaataaaaag ctgaactgtg tgaaaaaa  
 6988

<210> 5708

<211> 506

<212> PRT

<213> Homo sapiens

<400> 5708

Asp	Met	Ser	Glu	Ser	Lys	Ala	Lys	Lys	Ile	Glu	Ile	Lys	Asp	Val	Asp
1				5					10					15	
Gly	Gln	Thr	Leu	Ser	Lys	Leu	Ile	Asp	Tyr	Ile	Tyr	Thr	Ala	Glu	Ile
			20					25					30		
Glu	Val	Thr	Glu	Glu	Asn	Val	Gln	Val	Leu	Leu	Pro	Ala	Ala	Ser	Leu
			35				40					45			
Leu	Gln	Leu	Met	Asp	Val	Arg	Gln	Asn	Cys	Cys	Asp	Phe	Leu	Gln	Ser
			50				55				60				
Gln	Leu	His	Pro	Thr	Asn	Cys	Leu	Gly	Ile	Arg	Ala	Phe	Ala	Asp	Val
65					70				75					80	
His	Thr	Cys	Thr	Asp	Leu	Leu	Gln	Gln	Ala	Asn	Ala	Tyr	Ala	Glu	Gln
				85					90					95	
His	Phe	Pro	Glu	Val	Met	Leu	Gly	Glu	Glu	Phe	Leu	Ser	Leu	Ser	Leu
			100					105					110		
Asp	Gln	Val	Cys	Ser	Leu	Ile	Ser	Ser	Asp	Lys	Leu	Thr	Val	Ser	Ser
			115					120					125		
Glu	Glu	Lys	Val	Phe	Glu	Ala	Val	Ile	Ser	Trp	Ile	Asn	Tyr	Glu	Lys
			130				135					140			
Glu	Thr	Arg	Leu	Glu	His	Met	Ala	Lys	Leu	Met	Glu	His	Val	Arg	Leu
145					150				155					160	
Pro	Leu	Leu	Pro	Arg	Asp	Tyr	Leu	Val	Gln	Thr	Val	Glu	Glu	Glu	Ala
				165					170					175	
Leu	Ile	Lys	Asn	Asn	Asn	Thr	Cys	Lys	Asp	Phe	Leu	Ile	Glu	Ala	Met
			180					185					190		
Lys	Tyr	His	Leu	Leu	Pro	Leu	Asp	Gln	Arg	Leu	Leu	Ile	Lys	Asn	Pro
			195				200					205			
Arg	Thr	Lys	Pro	Arg	Thr	Pro	Val	Ser	Leu	Pro	Lys	Val	Met	Ile	Val
			210				215					220			
Val	Gly	Gly	Gln	Ala	Pro	Lys	Ala	Ile	Arg	Ser	Val	Glu	Cys	Tyr	Asp
225					230				235					240	
Phe	Glu	Glu	Asp	Arg	Trp	Asp	Gln	Ile	Ala	Glu	Leu	Pro	Ser	Arg	Arg
				245					250					255	
Cys	Arg	Ala	Gly	Val	Val	Phe	Met	Ala	Gly	His	Val	Tyr	Ala	Val	Gly
			260					265					270		
Gly	Phe	Asn	Gly	Ser	Leu	Arg	Val	Arg	Thr	Val	Asp	Val	Tyr	Asp	Gly
			275					280				285			
Val	Lys	Asp	Gln	Trp	Thr	Ser	Ile	Ala	Ser	Met	Gln	Glu	Arg	Arg	Ser
			290				295				300				
Thr	Leu	Gly	Ala	Ala	Val	Leu	Asn	Asp	Leu	Leu	Tyr	Ala	Val	Gly	Gly

```
<210> 5709
<211> 1805
<212> DNA
<213> Homo sapiens
```

```

<400> 5709
aatctcaccc ccctggtgga catggaggag ctggagatgt cagggaacca ctccctgag
60
atcaggcctg gctccttcca tggcctgagc tccctcaaga agctctgggt catgaactca
120
caggtcagcc tgattgagcg gaatgctttt gacgggctgg ctteacttgt ggaactcaac
180
ttggcccaca ataacctctc ttctttgccc catgacctct ttaccccgct gaggtacctg
240
gtggagttgc atctacacca caacccttgg aactgtgatt gtgacattct gtggctagcc
300
tgggtggcttc gagagtatat acccaccaat tccacctgct gtggccgctg tcatgctccc
360
atgcacatgc gaggcgcgta cctcgtggag gtggaccagg cctccttcca gtgctctgcc
420
cccttcatca tggacgcacc tcgagacctc aacatttctg agggtcggat ggcagaactt
480
aagtgtcgga ctccccctat gtccctcgtg aagtggttgc tgcccaatgg gacagtgtc
540
agccacgcct ccgcgccacc aaggatctct gtccctcaacg acggcacctt gaacttttcc
600
cacgtgctgc tttcagacac tgggggtgtac acatgcatgg tgaccaatgt tgcaggcaac
660

```

tccaacgcct cggcctacct caatgtgagc acggtgagc ttaacacctc caactacagc  
 720  
 ttcttcacca cagtaacagt ggagaccacg gagatctcgc ctgaggacac aacgcgaaaag  
 780  
 tacaagcctg ttcttaccac gtccactggc taccagccgg catataccac ctctaccacg  
 840  
 gtgtcatttc agactaccgc tgtgcccaag caggtggcag taccgcgcac agacaccact  
 900  
 gacaagatgc agaccagcct ggatgaagtc atgaagacca ccaagatcat cattggctgc  
 960  
 tttgtggcag tgactctgct agctgccgcc atgttgattg tttctataa acttcgtaag  
 1020  
 cggcaccagc agcggagtag agtcacagcc gcccgactg ttgagataat ccaggtggac  
 1080  
 gaagacatcc cagcagcaac atccgcagca gcaacagcag ctccgtccgg tgtatcaggt  
 1140  
 gagggggcag tagtctgccc cacaattcat gaccatatta actacaacac ctacaaacca  
 1200  
 gcacatgggg cccactggac agaaaacagc ctggggaact ctctgcacc caccgtcacc  
 1260  
 actatctctg aaccttatat aattcagacc cataccaagg acaaggtaca ggaaactcaa  
 1320  
 atatgactcc cctcccccac aaaaacttat aaaatgcaat agaatgcaca caaagacagc  
 1380  
 aacttttgta cagagtgggg agagactttt tcttgatat gcttatatat taagtctatg  
 1440  
 ggctgggtta aaaaaacaga ttatattaaa atttaaagac aaaaagtcaa acaaaaaata  
 1500  
 ttttctaact tgtaagttct atttaaaggg ggtggggggg aatcttggga acgttggtgg  
 1560  
 gtacaagcca caagttaact tgctatgctg ccagaaggga tttctggtat aagggtgaaa  
 1620  
 ttgctgagat aaaataaact aaaacaacaa acatccttaa agaggtaggg tgtgggctgc  
 1680  
 tgagggggca agagggatag actgaatctg tcatttttta gaagatgctt cataggacac  
 1740  
 aggactatcc atttctacag acatctttct taagccgaga gctgtctttg cagaattatc  
 1800  
 ttatt  
 1805

&lt;210&gt; 5710

&lt;211&gt; 441

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5710

Asn	Leu	Thr	Pro	Leu	Val	Asp	Met	Glu	Glu	Leu	Glu	Met	Ser	Gly	Asn
1				5				10					15		
His	Phe	Pro	Glu	Ile	Arg	Pro	Gly	Ser	Phe	His	Gly	Leu	Ser	Ser	Leu
			20				25					30			
Lys	Lys	Leu	Trp	Val	Met	Asn	Ser	Gln	Val	Ser	Leu	Ile	Glu	Arg	Asn
		35				40					45				
Ala	Phe	Asp	Gly	Leu	Ala	Ser	Leu	Val	Glu	Leu	Asn	Leu	Ala	His	Asn

50	55	60
Asn Leu Ser Ser Leu Pro His Asp Leu Phe Thr Pro Leu Arg Tyr Leu		
65	70	75
Val Glu Leu His Leu His His Asn Pro Trp Asn Cys Asp Cys Asp Ile		80
	85	90
Leu Trp Leu Ala Trp Trp Leu Arg Glu Tyr Ile Pro Thr Asn Ser Thr		95
	100	105
Cys Cys Gly Arg Cys His Ala Pro Met His Met Arg Gly Arg Tyr Leu		110
	115	120
Val Glu Val Asp Gln Ala Ser Phe Gln Cys Ser Ala Pro Phe Ile Met		125
	130	135
Asp Ala Pro Arg Asp Leu Asn Ile Ser Glu Gly Arg Met Ala Glu Leu		140
	145	150
Lys Cys Arg Thr Pro Pro Met Ser Ser Val Lys Trp Leu Leu Pro Asn		155
	165	170
Gly Thr Val Leu Ser His Ala Ser Arg His Pro Arg Ile Ser Val Leu		175
	180	185
Asn Asp Gly Thr Leu Asn Phe Ser His Val Leu Leu Ser Asp Thr Gly		190
	195	200
Val Tyr Thr Cys Met Val Thr Asn Val Ala Gly Asn Ser Asn Ala Ser		205
	210	215
Ala Tyr Leu Asn Val Ser Thr Ala Glu Leu Asn Thr Ser Asn Tyr Ser		220
	225	230
Phe Phe Thr Thr Val Thr Val Glu Thr Thr Glu Ile Ser Pro Glu Asp		235
	245	250
Thr Thr Arg Lys Tyr Lys Pro Val Pro Thr Thr Ser Thr Gly Tyr Gln		255
	260	265
Pro Ala Tyr Thr Thr Ser Thr Thr Val Leu Ile Gln Thr Thr Arg Val		270
	275	280
Pro Lys Gln Val Ala Val Pro Ala Thr Asp Thr Thr Asp Lys Met Gln		285
	290	295
Thr Ser Leu Asp Glu Val Met Lys Thr Thr Lys Ile Ile Ile Gly Cys		300
	305	310
Phe Val Ala Val Thr Leu Leu Ala Ala Ala Met Leu Ile Val Phe Tyr		315
	325	330
Lys Leu Arg Lys Arg His Gln Gln Arg Ser Thr Val Thr Ala Ala Arg		335
	340	345
Thr Val Glu Ile Ile Gln Val Asp Glu Asp Ile Pro Ala Ala Thr Ser		350
	355	360
Ala Ala Ala Thr Ala Ala Pro Ser Gly Val Ser Gly Glu Gly Ala Val		365
	370	375
Val Leu Pro Thr Ile His Asp His Ile Asn Tyr Asn Thr Tyr Lys Pro		380
	385	390
Ala His Gly Ala His Trp Thr Glu Asn Ser Leu Gly Asn Ser Leu His		395
	405	410
Pro Thr Val Thr Thr Ile Ser Glu Pro Tyr Ile Ile Gln Thr His Thr		415
	420	425
Lys Asp Lys Val Gln Glu Thr Gln Ile		430
	435	440

&lt;210&gt; 5711

&lt;211&gt; 1142

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



&lt;400&gt; 5711

tgggtgggtggg ggagtatgaa tgtggctttc agagttggat gttataaaac atagtcattt  
 60  
 ggaagttggg aactttttat ttttgttata ttgtttttaa tacaggatgt ttgccacacg  
 120  
 agtcactcga gagaatctct gagtcctggc gagggctttc tgaggcttcg tgtattagca  
 180  
 gctgtttgtct tccaactcag cggcagggtt gcctttcccc acggacactc tggaccttgt  
 240  
 agtcctcaa gcttccctgt ctattgagca gataggaagc cgtgtcaa atgtggcacc  
 300  
 ttgaggaaat gcctagttaa tgacagacaa cttgcctttg atgattttca agagagttgt  
 360  
 gctatgatgt ggcaaaagta tgcaggaagc aggcgggtcaa tgcctctggg agcaaggatc  
 420  
 cttttccacg gtgtgttcta tgccgggggc tttgccattg tgtattacct cattcaaaag  
 480  
 tttcattcca gggctttata ttacaagttg gcagtggagc agctgcagag ccattcccgag  
 540  
 gcacaggaag ctctggggcc tcctctcaac atccattatc tcaagctcat cgacagggaa  
 600  
 aacttcgtgg acattgttga tgccaagttg aagattcctg tctctggatc caaatcagag  
 660  
 ggcttctct acgtccactc atccagaggt ggcccctttc agaggtggca ccttgacgag  
 720  
 gtctttttag agctcaagga tggtcagcag attcctgtgt tcaagctcag tggggaaaaa  
 780  
 ggtgatgaag tgaaaaagga gtagagacga cccagaagac ccagcttgct tctagtccat  
 840  
 ccttccctca tctctaccat atggccactg ggggtggggc ccattctcagt gacagacact  
 900  
 cctgcaaccc agttttccag ccaccagtgg gatgatggta tgtgccagca catggtaatt  
 960  
 ttggtgtaat tctaacttgg gcacaacaaa tgctatttgt catttttaaa ctgaatccga  
 1020  
 aagaaactcc tattataaat ttaagataat gtaatgtatt tgaaagtgtt ttgtataaaa  
 1080  
 aagcacatga taaaaggaat cagaattaat aaaatgtttg ttgatcttta aaaaaaaaaa  
 1140  
 1142

&lt;210&gt; 5712

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5712

Met	Trp	Gln	Lys	Tyr	Ala	Gly	Ser	Arg	Arg	Ser	Met	Pro	Leu	Gly	Ala
1			5					10					15		
Arg	Ile	Leu	Phe	His	Gly	Val	Phe	Tyr	Ala	Gly	Gly	Phe	Ala	Ile	Val
		20					25					30			
Tyr	Tyr	Leu	Ile	Gln	Lys	Phe	His	Ser	Arg	Ala	Leu	Tyr	Tyr	Lys	Leu
		35					40					45			

Ala Val Glu Gln Leu Gln Ser His Pro Glu Ala Gln Glu Ala Leu Gly  
 50 55 60  
 Pro Pro Leu Asn Ile His Tyr Leu Lys Leu Ile Asp Arg Glu Asn Phe  
 65 70 75 80  
 Val Asp Ile Val Asp Ala Lys Leu Lys Ile Pro Val Ser Gly Ser Lys  
 85 90 95  
 Ser Glu Gly Leu Leu Tyr Val His Ser Ser Arg Gly Gly Pro Phe Gln  
 100 105 110  
 Arg Trp His Leu Asp Glu Val Phe Leu Glu Leu Lys Asp Gly Gln Gln  
 115 120 125  
 Ile Pro Val Phe Lys Leu Ser Gly Glu Asn Gly Asp Glu Val Lys Lys  
 130 135 140  
 Glu  
 145

&lt;210&gt; 5713

&lt;211&gt; 1996

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5713

ncgagcgggt gctgctagcg gaggcgccat attggagggg acaaaactcc ggcgacagcg  
 60  
 agtgacacaa ataaaccctt ggacccctt gttccctcag ctctaagggc cgcgatgttg  
 120  
 tacctagaag actatctgga aatgattgag cagcttccta tggatctgcg ggaccgcttc  
 180  
 acggaaatgc gcgagatgga cctgcaggtg cagaatgcaa tggatcaact agaacaaaga  
 240  
 gtcagtgaat tctttatgaa tgcaaagaaa aataaacctg agtggaggga agagcaaag  
 300  
 gcatccatca aaaaagacta ctataaagct ttggaagatg cagatgagaa ggttcagtgg  
 360  
 gcaaaccaga tatatgactt ggtagatcga cacttgagaa agctggatca ggaactggct  
 420  
 aagtttaaaa tggagctgga agctgataat gctggaatta cagaaatatt agagaggcga  
 480  
 tctttggaat tagacactcc ttcacagcca gtgaacaatc accatgctca ttcacatact  
 540  
 ccagtggaaa aaaggaaata taatccaact tctcaccata cgacaacaga tcatattcct  
 600  
 gaaaagaaat ttaaactctga agctcttcta tccaccctta cgtcagatgc ctctaaggaa  
 660  
 aatacactag gttgtcgaaa taataattcc acagcctctt ctaacaatgc ctacaatgtg  
 720  
 aattcctccc aacctctggg atcctataac attggctcgt tatcttcagg aactgggtgca  
 780  
 ggggcaatta ccatggcagc tgctcaagca gttcaggcta cagctcagat gaaggaggga  
 840  
 cgaagaacat caagtttaaa agccagttat gaagcattta agaataatga ctttcagtgg  
 900  
 ggaaaagaat tttcaatggc cagggaaaca gttggctatt catcatcttc ggcacttatg  
 960

acaacattaa cacagaatgc cagttcatca gcagccgact cacggagtgg tcgaaagagc  
 1020  
 aaaaacaaca acaagtcttc aagccagcag tcatcatctt cctcctcctc ttcttcctta  
 1080  
 tcacgtggtt cttcatcatc aactgttgta caagaaatct ctcaacaaac aactgtagtg  
 1140  
 ccagaatctg attcaaatag tcaggttgat tggacttacg acccaaatac acctcgatac  
 1200  
 tgcatttgta atcaggtatc ttatggtgag atggtgggat gtgataacca agattgccct  
 1260  
 atagaatggt tccattatgg ctgcgttgga ttgacagagg caccaaaagg caaatggtac  
 1320  
 tgtccacagt gcactgctgc aatgaagaga agaggcagca gacacaaata aagggtggtc  
 1380  
 ttttgtttga tgaagaaata aacttcagct gaagatttta tataggactt taaaaagaag  
 1440  
 agaagagaaa gaagaaacaa tgcatttcca ggcaaccact taaaggattt acatagacaa  
 1500  
 tcctataaga tcttgaactt gaattttatg ggttgatatt taataatgta agtaaattat  
 1560  
 ttatgcactc ctggtgtgct atgaatatta ttccagttag ccttggatta tttcagtggc  
 1620  
 caacatatgc agacatttgt actcctcaac catcttctca aagtaatggg cattctatga  
 1680  
 tttagacttc aaggaattcc aatgatgaag attttaagga aagtatttta tattcaacag  
 1740  
 gtatattctg ctgcatgtac tgtactccag agctgttatg taacactgta tataaatggt  
 1800  
 tgcaaaaaaa aaaaagtcag tgcttctaaa aagaatttaa gataatggtt tttaaaatgc  
 1860  
 ctttataata agctttgttt ctttgtgaaa ctaattcagc aggctgaagg aaatggttca  
 1920  
 tgtgataatg tgggctggta tcctctagag tacctgggta cataaacgga aactcctgtt  
 1980  
 gggtaaaagt attttg  
 1996

&lt;210&gt; 5714

&lt;211&gt; 408

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5714

Ile	Glu	Gln	Leu	Pro	Met	Asp	Leu	Arg	Asp	Arg	Phe	Thr	Glu	Met	Arg
1				5				10					15		
Glu	Met	Asp	Leu	Gln	Val	Gln	Asn	Ala	Met	Asp	Gln	Leu	Glu	Gln	Arg
			20					25					30		
Val	Ser	Glu	Phe	Phe	Met	Asn	Ala	Lys	Lys	Asn	Lys	Pro	Glu	Trp	Arg
			35					40					45		
Glu	Glu	Gln	Met	Ala	Ser	Ile	Lys	Lys	Asp	Tyr	Tyr	Lys	Ala	Leu	Glu
			50				55					60			
Asp	Ala	Asp	Glu	Lys	Val	Gln	Leu	Ala	Asn	Gln	Ile	Tyr	Asp	Leu	Val
65					70					75				80	
Asp	Arg	His	Leu	Arg	Lys	Leu	Asp	Gln	Glu	Leu	Ala	Lys	Phe	Lys	Met

	85		90		95										
Glu	Leu	Glu	Ala	Asp	Asn	Ala	Gly	Ile	Thr	Glu	Ile	Leu	Glu	Arg	Arg
		100					105						110		
Ser	Leu	Glu	Leu	Asp	Thr	Pro	Ser	Gln	Pro	Val	Asn	Asn	His	His	Ala
		115						120					125		
His	Ser	His	Thr	Pro	Val	Glu	Lys	Arg	Lys	Tyr	Asn	Pro	Thr	Ser	His
		130					135					140			
His	Thr	Thr	Thr	Asp	His	Ile	Pro	Glu	Lys	Lys	Phe	Lys	Ser	Glu	Ala
		145				150					155				160
Leu	Leu	Ser	Thr	Leu	Thr	Ser	Asp	Ala	Ser	Lys	Glu	Asn	Thr	Leu	Gly
				165					170					175	
Cys	Arg	Asn	Asn	Asn	Ser	Thr	Ala	Ser	Ser	Asn	Asn	Ala	Tyr	Asn	Val
			180					185					190		
Asn	Ser	Ser	Gln	Pro	Leu	Gly	Ser	Tyr	Asn	Ile	Gly	Ser	Leu	Ser	Ser
		195					200					205			
Gly	Thr	Gly	Ala	Gly	Ala	Ile	Thr	Met	Ala	Ala	Ala	Gln	Ala	Val	Gln
		210				215						220			
Ala	Thr	Ala	Gln	Met	Lys	Glu	Gly	Arg	Arg	Thr	Ser	Ser	Leu	Lys	Ala
		225			230					235					240
Ser	Tyr	Glu	Ala	Phe	Lys	Asn	Asn	Asp	Phe	Gln	Leu	Gly	Lys	Glu	Phe
			245					250						255	
Ser	Met	Ala	Arg	Glu	Thr	Val	Gly	Tyr	Ser	Ser	Ser	Ser	Ala	Leu	Met
			260					265					270		
Thr	Thr	Leu	Thr	Gln	Asn	Ala	Ser	Ser	Ser	Ala	Ala	Asp	Ser	Arg	Ser
		275					280					285			
Gly	Arg	Lys	Ser	Lys	Asn	Asn	Asn	Lys	Ser	Ser	Ser	Gln	Gln	Ser	Ser
		290				295					300				
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Leu	Ser	Ser	Cys	Ser	Ser	Ser	Ser	Thr
		305				310				315					320
Val	Val	Gln	Glu	Ile	Ser	Gln	Gln	Thr	Thr	Val	Val	Pro	Glu	Ser	Asp
			325					330						335	
Ser	Asn	Ser	Gln	Val	Asp	Trp	Thr	Tyr	Asp	Pro	Asn	Glu	Pro	Arg	Tyr
			340					345				350			
Cys	Ile	Cys	Asn	Gln	Val	Ser	Tyr	Gly	Glu	Met	Val	Gly	Cys	Asp	Asn
		355						360				365			
Gln	Asp	Cys	Pro	Ile	Glu	Trp	Phe	His	Tyr	Gly	Cys	Val	Gly	Leu	Thr
		370				375				380					
Glu	Ala	Pro	Lys	Gly	Lys	Trp	Tyr	Cys	Pro	Gln	Cys	Thr	Ala	Ala	Met
		385			390					395					400
Lys	Arg	Arg	Gly	Ser	Arg	His	Lys								
				405											

&lt;210&gt; 5715

&lt;211&gt; 1458

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5715

nggaaaggag ggtcaggcga gtccacgtga gggaagcccc cgctgtgctg ggagcctctg  
60

ctgggaggag ggggagtgcc agccccagg agctaataccc cggtgatgg cgcagggccg  
120

ggggcttgcc cgtctagtgt gatgaaggag ggcaccccca aggtgggaag ggcacgggt  
180

tggggtttga ggggtgatga ttggtgacgg aggggtgtatc ttcaggagga ggttcgagtg  
240  
aagatcaaag acttgaatga acacattggt tgctgcctat gcgcgggcta cttcgtggat  
300  
gccaccacca tcacagagtg tcttcatact ttctgcaaga gttgtattgt gaagtacctc  
360  
caaactagca agtactgccc catgtgcaac attaagatcc acgagacaca gccactgctc  
420  
aacctcaaac tggaccgggt catgcaggac atcgtgtata agctgggtgcc tggtttgcaa  
480  
gacagtgaag agaaacggat tcgggaattc taccagtccc gaggtttgga ccgggtcacc  
540  
cagcccactg gggaagagcc agcactgagc aacctcggcc tccccttcag cagctttgac  
600  
cactctaaag cccactacta tcgctatgat gagcagttga acctgtgcct ggagcggctg  
660  
aggtgaggag aaggtcaggg gttgcaggag gtgacagtgc caatgaccca gagccaggga  
720  
gggtctaggg gagaggtga gcagtgagt agtgccatc cccttgaaaga gagtatatca  
780  
tggtctctggg tggggaagag gaggaagat aggattccct aacctgtgtc tatttcccc  
840  
cagttctggc aaagacaaga ataaaagcgt cctgcagggt agaagggtg aggggagggc  
900  
ctctctaagg agactcacct cccatggtcc ttcctcaca caccttgccc tcttccctcc  
960  
cctccctgct ccagaacaa gtatgtccga tgttctgtta gagctgaggt acgccatctc  
1020  
cggagggtcc tgtgtcaccg cttgatgcta aacctcagc atgtgcagct cctttttgac  
1080  
aatgaagttc tcctgatca catgacaatg aagcagatat gcctctcccg ctggttcggc  
1140  
aaggtaagcc aggccacct cctggggtc acacccctt cagactcccc ccaaccatcc  
1200  
tacagtccctc aggggaaggg tgggtgagg ggccctttga ataataaag aacattcccc  
1260  
acgtactcca acttctcat tctctctta gccatccct ttgcttttac aataaagtgt  
1320  
gaaagagaag aggaggtagg ggccaagccc ccacccatc ccactccct tcctcccca  
1380  
gatatttatg tgaaatgaac tgcagcttta tttttgaaa taaaaacttt taaaaagcaa  
1440  
aaaaaaaaa aaaaaaaa  
1458

&lt;210&gt; 5716

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5716

Leu	Gln	Glu	Val	Arg	Val	Lys	Ile	Lys	Asp	Leu	Asn	Glu	His	Ile
1			5			10			15					
Val	Cys	Cys	Leu	Cys	Ala	Gly	Tyr	Phe	Val	Asp	Ala	Thr	Thr	Ile

20 25 30  
 Glu Cys Leu His Thr Phe Cys Lys Ser Cys Ile Val Lys Tyr Leu Gln  
 35 40 45  
 Thr Ser Lys Tyr Cys Pro Met Cys Asn Ile Lys Ile His Glu Thr Gln  
 50 55 60  
 Pro Leu Leu Asn Leu Lys Leu Asp Arg Val Met Gln Asp Ile Val Tyr  
 65 70 75 80  
 Lys Leu Val Pro Gly Leu Gln Asp Ser Glu Glu Lys Arg Ile Arg Glu  
 85 90 95  
 Phe Tyr Gln Ser Arg Gly Leu Asp Arg Val Thr Gln Pro Thr Gly Glu  
 100 105 110  
 Glu Pro Ala Leu Ser Asn Leu Gly Leu Pro Phe Ser Ser Phe Asp His  
 115 120 125  
 Ser Lys Ala His Tyr Tyr Arg Tyr Asp Glu Gln Leu Asn Leu Cys Leu  
 130 135 140  
 Glu Arg Leu Arg  
 145

&lt;210&gt; 5717

&lt;211&gt; 1419

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5717

gggccctcc ttggctgtat ccgtcagtgg ctccagggtta agtctgcccc cccaccctc  
 60  
 gtggggcggg gagcccgagg cagcccagag gctgggggaa gggggtggac ttttgcccc  
 120  
 ttctggttat tccctccatc tcgtcaacag ctgcccgcgc caggcttagc tcattctct  
 180  
 gacctgccag gaagcagaga gaccacaga gcaggaggga ggcagaaagt ggagacggac  
 240  
 ctgagcccga ggaagaggca ggcagaggct gaggtgatt ccacccagc ctgcctggac  
 300  
 aacctctctt agccgcagcc ccttcagtt ccctaggggt tctgcccctc cccctctctg  
 360  
 gggcaccagc ccccagggt cctgcatccc accatgtcga tggctgtgga aacctttggc  
 420  
 ttcttcatgg caactgtggg gctgctgatg ctgggggtga ctctgcaaaa cagctactgg  
 480  
 cgagtgtcca ctgtgcacgg gaacgtcatc accaccaaca ccattctcga gaacctctgg  
 540  
 tttagctgtg ccaccgactc cctgggcgtc tacaactgct gggagtccc gtccatgctg  
 600  
 gccctctctg ggtatattca ggctgcccgc gactcatga tcaccgccat cctctgggc  
 660  
 ttctcggcc tcttgctagg catagcgggc ctgcgctgca ccaacattgg gggcctggag  
 720  
 ctctccagga aagccaagct ggcggccacc gcaggggccc tccacattct ggccggtatc  
 780  
 tgcgggatgg tggccatctc ctggtacgcc ttcaacatca cccgggactt cttegacccc  
 840  
 ttgtaccccg gaaccaagta cgagctgggc cccgccctct acctggggtg gaggcctca  
 900

ctgatctcca tectgggtgg cctctgctc tgctccgect gctgctgagg ctctgacgag  
 960  
 gacccagccg ccagcgcccg ggggcctac caggctcccg tgtccgtgat gcccgtcgcc  
 1020  
 acctcggacc aagaaggcga cagcagcttt ggcaaatacg gcagaaacgc ctacgtgtag  
 1080  
 cagctctggc ccgtggggcc cgctgtcttc ccaactgccc aaggagaggg gacctggccg  
 1140  
 gggcccatc cctatagta acctcagggg ccggccaacgc cccgctcccg tagccccgcc  
 1200  
 ccggccaacg ccccggtgtc tgcactctca tggccctcc aggccaagaa ctgctcttgg  
 1260  
 gaagtcgcat atctccctc tgaggctgga tccctcatct tctgacctg ggttctgggc  
 1320  
 tgtgaagggg acggtgtccc cgcacgtttg tattgtgtat aaatacattc attaataaat  
 1380  
 gcatattgtg accgttaaaa aaaaaaaaaa aaaaaaaaaa  
 1419

&lt;210&gt; 5718

&lt;211&gt; 228

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5718

Met	Ser	Met	Ala	Val	Glu	Thr	Phe	Gly	Phe	Phe	Met	Ala	Thr	Val	Gly
1				5				10						15	
Leu	Leu	Met	Leu	Gly	Val	Thr	Leu	Pro	Asn	Ser	Tyr	Trp	Arg	Val	Ser
			20					25					30		
Thr	Val	His	Gly	Asn	Val	Ile	Thr	Thr	Asn	Thr	Ile	Phe	Glu	Asn	Leu
		35					40					45			
Trp	Phe	Ser	Cys	Ala	Thr	Asp	Ser	Leu	Gly	Val	Tyr	Asn	Cys	Trp	Glu
	50					55					60				
Phe	Pro	Ser	Met	Leu	Ala	Leu	Ser	Gly	Tyr	Ile	Gln	Ala	Cys	Arg	Ala
65				70					75					80	
Leu	Met	Ile	Thr	Ala	Ile	Leu	Leu	Gly	Phe	Leu	Gly	Leu	Leu	Leu	Gly
			85					90					95		
Ile	Ala	Gly	Leu	Arg	Cys	Thr	Asn	Ile	Gly	Gly	Leu	Glu	Leu	Ser	Arg
			100					105					110		
Lys	Ala	Lys	Leu	Ala	Ala	Thr	Ala	Gly	Ala	Leu	His	Ile	Leu	Ala	Gly
		115					120					125			
Ile	Cys	Gly	Met	Val	Ala	Ile	Ser	Trp	Tyr	Ala	Phe	Asn	Ile	Thr	Arg
	130					135					140				
Asp	Phe	Phe	Asp	Pro	Leu	Tyr	Pro	Gly	Thr	Lys	Tyr	Glu	Leu	Gly	Pro
145				150					155				160		
Ala	Leu	Tyr	Leu	Gly	Trp	Ser	Ala	Ser	Leu	Ile	Ser	Ile	Leu	Gly	Gly
			165					170					175		
Leu	Cys	Leu	Cys	Ser	Ala	Cys	Cys	Cys	Gly	Ser	Asp	Glu	Asp	Pro	Ala
			180					185					190		
Ala	Ser	Ala	Arg	Arg	Pro	Tyr	Gln	Ala	Pro	Val	Ser	Val	Met	Pro	Val
		195					200					205			
Ala	Thr	Ser	Asp	Gln	Glu	Gly	Asp	Ser	Ser	Phe	Gly	Lys	Tyr	Gly	Arg
	210					215					220				
Asn	Ala	Tyr	Val												

225

&lt;210&gt; 5719

&lt;211&gt; 2267

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5719

ntgtcagcag agccctgtac cgtgcgcctc agcaaactcc tccatctatt gctccaaggc  
60  
ccgcctttga tgtaggtcc tggagaagg gaagtgggtc gggaccacaca ggtccagctg  
120  
ctccgtgcca tgcagtcggg aaagggaaac aggcactaat caaaggcaac tgctcactcg  
180  
tacctctttc ttctgaagca catgatgaag tctattctca gcagcgattt tctttacaaa  
240  
ctctttcggt aatcccccca gagggagat ggttctctc agggcactct gggaaacctg  
300  
gcattttctaa cttcaaaccg atttctgaaa agcccttcgg gcttcttaac gtgcttctgc  
360  
tcaaagactt cttcatcttc cagggaagtt cttgcatagt gacctgtggc aatggcatct  
420  
gccctgaac acatcattcc aatactcctt tacgtaggac acttgatgga aagggatgct  
480  
taagatctgg caaactctgt aagcatcttc acagtctttg tcggcagtac agaccccatg  
540  
ttcatccagt gagtccagt tcttcataaa caccctgtc acctggtaac ctctccgct  
600  
cagcagcagc gcggccacgg cgtgtccac gccgcggac agggcgacaca cgacgtgccg  
660  
caaggcctgc atccgccagt cgcctcgtcc ggccggcgtg acagcgccgt ggccgcgtg  
720  
ctgctgaggc ggagagggtt ccagggtgaca ggggtgttta tgaagaactg ggactcactg  
780  
gatgaacatg ggtctgtac tgccgacaaa gactgtgaag atgcttacag agtttgccag  
840  
atcttagaca tccctttcca tcaagtgtcc tacgtaaagg agtattggaa tgatgtgttc  
900  
agtgactttt tgaatgagta tgaaaaagga aggactccca atcctgacat agtttgcaac  
960  
aagcacatca aatttagttg cttttttcat tatgctgtgg ataactcttg ggcagatgcc  
1020  
attgccacag gtcactatgc aagaacttcc ctggaagatg aagaagtctt tgagcagaag  
1080  
cacgttaaga agccgaagg gcttttcaga aatcggtttg aagttagaaa tgcggtaaaa  
1140  
ctcctccagg cagctgacag ctttaaagac cagaccttct ttctcagcca ggtttcccag  
1200  
gatgccctga ggagaacct cttccctctg gggggattaa cgaaagagtt tgtaaagaaa  
1260  
atcgctgctg agaatagact tcatcatgtg cttcagaaga aagagagcat gggcatgtgt  
1320  
ttcatcgga agaggaattt tgaacatttc cttcttcagt atctgcagcc tcgacctggt  
1380



cactttatatt ccatagaaga caataagggtt ctgggaacac ataaagggtg gttcctgtat  
 1440  
 accttgggcc agagagcaaa cataggtggc ctgagagagc cctggtacgt ggtggagaag  
 1500  
 gacagcgtca aggggtgacgt gtttgtggcc ccccgacag accacccagc cctgtacagg  
 1560  
 gacctgctga ggaccagccg cgtgcactgg attgaggagg agcctcccg agcactggtc  
 1620  
 cgggacaaga tgatggagtg ccacttccga ttccgccacc agatggcact agtgccctgt  
 1680  
 gtgctgaccc tcaatcaaga tggcaccgtg tgggtgacag ctgtgcaggc tgtgcgtgcc  
 1740  
 cttgccacag gacagtttgc tgtgttctac aagggggacg agtgccctggg cagcgggaag  
 1800  
 atcctgcggc tggggccgctc tgcctacacg ctccagaagg gccagcgcag agctgggatg  
 1860  
 gccactgaga gccccagtga cagcccagaa gatggtccag gcctgagtcc cttgctctga  
 1920  
 cagagatgga tctgctagaa ggaacctgga gacgaggacc catggctggg cggctggtga  
 1980  
 gcagtccagg tgcccaaggg ccagcttgct gctgccc aaa gcagaggaag ccgggctggc  
 2040  
 tgagggtccg aaaagcctgc agggggcccg cgagccccag gaagagcctc agctccaggc  
 2100  
 tggggctctg gctgctggag catctgctgg ctggtggggg ggcccagatt ccccttcacc  
 2160  
 gccccaggg aggggtttccc acctcagagt acaccgaggg gacctgcaga gggggctgtc  
 2220  
 gggacagcgt ggaataaaca ttatttcaag gaaaaaaaa aaaaaaa  
 2267

&lt;210&gt; 5720

&lt;211&gt; 455

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5720

Val	Pro	Val	Leu	His	Lys	His	Pro	Cys	His	Leu	Val	Thr	Ser	Pro	Pro
1				5					10					15	
Gln	Gln	Gln	Arg	Gly	His	Gly	Ala	Val	His	Ala	Ala	Gly	Gln	Gly	Ala
			20					25					30		
His	Asp	Val	Pro	Gln	Gly	Leu	His	Pro	Pro	Val	Ala	Pro	Ser	Gly	Gly
	35					40						45			
Val	Asp	Ser	Ala	Val	Ala	Ala	Leu	Leu	Leu	Arg	Arg	Arg	Gly	Tyr	Gln
	50				55					60					
Val	Thr	Gly	Val	Phe	Met	Lys	Asn	Trp	Asp	Ser	Leu	Asp	Glu	His	Gly
	65			70				75					80		
Val	Cys	Thr	Ala	Asp	Lys	Asp	Cys	Glu	Asp	Ala	Tyr	Arg	Val	Cys	Gln
			85					90					95		
Ile	Leu	Asp	Ile	Pro	Phe	His	Gln	Val	Ser	Tyr	Val	Lys	Glu	Tyr	Trp
		100					105						110		
Asn	Asp	Val	Phe	Ser	Asp	Phe	Leu	Asn	Glu	Tyr	Glu	Lys	Gly	Arg	Thr
		115					120					125			
Pro	Asn	Pro	Asp	Ile	Val	Cys	Asn	Lys	His	Ile	Lys	Phe	Ser	Cys	Phe

130                      135                      140  
 Phe His Tyr Ala Val Asp Asn Leu Gly Ala Asp Ala Ile Ala Thr Gly  
 145                      150                      155                      160  
 His Tyr Ala Arg Thr Ser Leu Glu Asp Glu Glu Val Phe Glu Gln Lys  
                     165                      170                      175  
 His Val Lys Lys Pro Glu Gly Leu Phe Arg Asn Arg Phe Glu Val Arg  
                     180                      185                      190  
 Asn Ala Val Lys Leu Leu Gln Ala Ala Asp Ser Phe Lys Asp Gln Thr  
                     195                      200                      205  
 Phe Phe Leu Ser Gln Val Ser Gln Asp Ala Leu Arg Arg Thr Ile Phe  
                     210                      215                      220  
 Pro Leu Gly Gly Leu Thr Lys Glu Phe Val Lys Lys Ile Ala Ala Glu  
 225                      230                      235                      240  
 Asn Arg Leu His His Val Leu Gln Lys Lys Glu Ser Met Gly Met Cys  
                     245                      250                      255  
 Phe Ile Gly Lys Arg Asn Phe Glu His Phe Leu Leu Gln Tyr Leu Gln  
                     260                      265                      270  
 Pro Arg Pro Gly His Phe Ile Ser Ile Glu Asp Asn Lys Val Leu Gly  
                     275                      280                      285  
 Thr His Lys Gly Trp Phe Leu Tyr Thr Leu Gly Gln Arg Ala Asn Ile  
                     290                      295                      300  
 Gly Gly Leu Arg Glu Pro Trp Tyr Val Val Glu Lys Asp Ser Val Lys  
 305                      310                      315                      320  
 Gly Asp Val Phe Val Ala Pro Arg Thr Asp His Pro Ala Leu Tyr Arg  
                     325                      330                      335  
 Asp Leu Leu Arg Thr Ser Arg Val His Trp Ile Ala Glu Glu Pro Pro  
                     340                      345                      350  
 Ala Ala Leu Val Arg Asp Lys Met Met Glu Cys His Phe Arg Phe Arg  
                     355                      360                      365  
 His Gln Met Ala Leu Val Pro Cys Val Leu Thr Leu Asn Gln Asp Gly  
                     370                      375                      380  
 Thr Val Trp Val Thr Ala Val Gln Ala Val Arg Ala Leu Ala Thr Gly  
 385                      390                      395                      400  
 Gln Phe Ala Val Phe Tyr Lys Gly Asp Glu Cys Leu Gly Ser Gly Lys  
                     405                      410                      415  
 Ile Leu Arg Leu Gly Pro Ser Ala Tyr Thr Leu Gln Lys Gly Gln Arg  
                     420                      425                      430  
 Arg Ala Gly Met Ala Thr Glu Ser Pro Ser Asp Ser Pro Glu Asp Gly  
                     435                      440                      445  
 Pro Gly Leu Ser Pro Leu Leu  
                     450                      455

&lt;210&gt; 5721

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5721

ttagacatag ctaaccagac aggcagatca atcagaattc ccccatcaga aagaaaagcc

60

cttatggttag ctatgggata tcatgagaag ggcagagctt tcctgaaaag aaaagaatat

120

ggaatagcct tgccatgtct gttggacgct gacaaatatt tctgggtgggc gcttttgtac

180

ttggtgaaca ccagctttaa ggaagatggc ccagactata cagaacacct gccatgccct  
 240  
 tgagactgca gactttcatc tacaacagtg gttaatgtaa aagagtagtt atggtgtaaa  
 300  
 ctggtgaatt tcttcttccc ttgtatttc taattgacct ttctccctg taaagaaaa  
 360  
 aattttcaag caggtaggat atgctctctt tttctgtaca  
 400

<210> 5722

<211> 80

<212> PRT

<213> Homo sapiens

<400> 5722

Leu	Asp	Ile	Ala	Asn	Gln	Thr	Gly	Arg	Ser	Ile	Arg	Ile	Pro	Pro	Ser
1				5					10					15	
Glu	Arg	Lys	Ala	Leu	Met	Leu	Ala	Met	Gly	Tyr	His	Glu	Lys	Gly	Arg
			20					25					30		
Ala	Phe	Leu	Lys	Arg	Lys	Glu	Tyr	Gly	Ile	Ala	Leu	Pro	Cys	Leu	Leu
		35					40					45			
Asp	Ala	Asp	Lys	Tyr	Phe	Trp	Trp	Ala	Leu	Leu	Tyr	Leu	Val	Asn	Thr
	50					55					60				
Ser	Phe	Lys	Glu	Asp	Gly	Pro	Asp	Tyr	Thr	Glu	His	Leu	Pro	Cys	Pro
65					70					75				80	

<210> 5723

<211> 376

<212> DNA

<213> Homo sapiens

<400> 5723

nttaccacat tttcttcttt tcacccaccc cagccaaaac tcagtgcctt caaggctcgg  
 60  
 aagaatgtgg agagttttct agaagcctgt cgaaaaatgg ggggtgcctga ggtatggggg  
 120  
 ctgctttcta aagagtgtg gcatgccgga ctgagcggag ccatgtggca tggatgggtg  
 180  
 gcttccattt gcagcggatg tctgctctca gatgaaggca caggctgccc ctgectgccc  
 240  
 cagcatgccc cctgccctgc atgccccctg cctgcatgt cacctgtcct acacatcccc  
 300  
 tgccctgcag gcccacattt gtccctgcatg tcacctgtcc tgcacatgcc ctgccctgca  
 360  
 ctccctctgc acgcgt  
 376

<210> 5724

<211> 125

<212> PRT

<213> Homo sapiens

<400> 5724

Xaa Thr Thr Phe Ser Ser Phe His Pro Pro Gln Pro Lys Leu Ser Ala

1	5	10	15
Leu Lys Ala Arg Lys Asn Val Glu Ser Phe Leu Glu Ala Cys Arg Lys			
	20	25	30
Met Gly Val Pro Glu Val Trp Gly Leu Leu Ser Lys Glu Trp Trp His			
	35	40	45
Ala Gly Leu Ser Gly Ala Met Trp His Gly Trp Trp Ala Ser Ile Cys			
	50	55	60
Ser Gly Cys Leu Leu Ser Asp Glu Gly Thr Gly Cys Pro Cys Leu Pro			
65	70	75	80
Gln His Ala Pro Cys Pro Ala Cys Pro Leu Pro Cys Met Ser Pro Val			
	85	90	95
Leu His Ile Pro Cys Pro Ala Gly Pro Ile Leu Ser Cys Met Ser Pro			
	100	105	110
Val Leu His Met Pro Cys Pro Ala Leu Leu Leu His Ala			
	115	120	125

&lt;210&gt; 5725

&lt;211&gt; 1160

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5725

```

gctttttttt cttttctccc tccggtcttc ctttttgact ccctcccct ttatgctgc
60
ccagccctcc cctgctgct gagaagtggg ggagggtctc ggctccagg ttcccgcccc
120
accgcgcacg ggcgagcatg gggggcaagc agagcacggc gaccgctcc cgggggcccc
180
ttcccggggg tctccaccga tgacagcgcc gtgcccgcgc cgggaggggc gccccatttc
240
gggcactacc ggaaggcgcg cggggccatg gggctgcgca ggcacatcgg cagctcgggtg
300
gcaggcatgg gcatggaccc cagcacggcc gggggggtgc cttttggcct ctacaccccc
360
gcctcccggg gcaccggcga ctccgagagg gcgcccggcg gcggagggtc tgcgtccgac
420
tccacctatg cccatggcaa tggttaccag gagacgggcg gcggtcacca tagagacggg
480
atgctgtacc tgggctcccg agcctcgctg gcggatgctc tacctctgca catcgacccc
540
agggtggttca gctcgcatag tggtttcaag tgccccattt gctccaagtc tgtggttct
600
gacgagatgg aaatgcactt tataatgtgt ttgagcaaac ctgcctctc ctacaacgat
660
gatgtgctga ctaaagacgc gggtagtgt gtgatctgcc tggaggagct gctgcagggg
720
gacacgatag ccaggctgcc ctgcctgtgc atctatcaca aaagctgcat agactcgtgg
780
tttgaagtga acagatcttg tccggaacac cctgcggact gacctgcggg cttgcttgct
840
gactcctctc aaaggacag agcgcccctg ctccaggag gaggtcacc ggaccctggg
900
gcagagctga gcttgggaca ccagcgggaa cagggcaccc cttctgcact gacttccaga
960

```

tcattggttct ccttctctcc ctgaggacac caaattggat gagagcaagt ttgagagaag  
 1020  
 aatgaatcaa ctgctatcct tcccctcacc cctcagccca ggagggaaag ggcattttct  
 1080  
 ttttcattct tgaagggcat tgtgggtctg tctttaagt gtttacaaaa aaattatata  
 1140  
 aaaaaaagtc tagtgtagac  
 1160

<210> 5726

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5726

Ala	Phe	Phe	Pro	Phe	Leu	Pro	Pro	Arg	Leu	Leu	Phe	Asp	Ser	Leu	Pro	1	5	10	15
Leu	Tyr	Ala	Arg	Pro	Ala	Leu	Pro	Leu	Leu	Leu	Arg	Ser	Gly	Gly	Gly	20	25	30	
Ser	Arg	Pro	Pro	Gly	Ser	Arg	Pro	Thr	Ala	His	Gly	Arg	Ala	Trp	Gly	35	40	45	
Ala	Ser	Arg	Ala	Arg	Arg	Pro	Ala	Pro	Gly	Gly	Pro	Phe	Pro	Gly	Val	50	55	60	
Ser	Thr	Asp	Asp	Ser	Ala	Val	Pro	Pro	Pro	Gly	Gly	Ala	Pro	His	Phe	65	70	75	80
Gly	His	Tyr	Arg	Thr	Gly	Gly	Gly	Ala	Met	Gly	Leu	Arg	Ser	Ala	Ser	85	90	95	
Val	Ser	Ser	Val	Ala	Gly	Met	Gly	Met	Asp	Pro	Ser	Thr	Ala	Gly	Gly	100	105	110	
Val	Pro	Phe	Gly	Leu	Tyr	Thr	Pro	Ala	Ser	Arg	Gly	Thr	Gly	Asp	Ser	115	120	125	
Glu	Arg	Ala	Pro	Gly	Gly	Gly	Gly	Ser	Ala	Ser	Asp	Ser	Thr	Tyr	Ala	130	135	140	
His	Gly	Asn	Gly	Tyr	Gln	Glu	Thr	Gly	Gly	Gly	His	His	Arg	Asp	Gly	145	150	155	160
Met	Leu	Tyr	Leu	Gly	Ser	Arg	Ala	Ser	Leu	Ala	Asp	Ala	Leu	Pro	Leu	165	170	175	
His	Ile	Ala	Pro	Arg	Trp	Phe	Ser	Ser	His	Ser	Gly	Phe	Lys	Cys	Pro	180	185	190	
Ile	Cys	Ser	Lys	Ser	Val	Ala	Ser	Asp	Glu	Met	Glu	Met	His	Phe	Ile	195	200	205	
Met	Cys	Leu	Ser	Lys	Pro	Arg	Leu	Ser	Tyr	Asn	Asp	Asp	Val	Leu	Thr	210	215	220	
Lys	Asp	Ala	Gly	Glu	Cys	Val	Ile	Cys	Leu	Glu	Glu	Leu	Leu	Gln	Gly	225	230	235	240
Asp	Thr	Ile	Ala	Arg	Leu	Pro	Cys	Leu	Cys	Ile	Tyr	His	Lys	Ser	Cys	245	250	255	
Ile	Asp	Ser	Trp	Phe	Glu	Val	Asn	Arg	Ser	Cys	Pro	Glu	His	Pro	Ala	260	265	270	

Asp

<210> 5727

<211> 1237

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5727

ntgagaaggg aggtgaccac caggactggc tctgtgagta ccacacagtg ggaggggggtg  
60  
ggggccacca tgtcatcata tcagaaggaa ctggagaaat acagagacat agatgaagat  
120  
gagatcctaa ggaccttgag ccccgaggag ctagagcagc tggactgcga actacaggag  
180  
atggatcctg agaacatgct cctgccagct ggactaagac aacgtgacca gacaaagaag  
240  
agcccaacgg ggccactgga ccgagaggcc cttttgcagt acttgagca acaggcacta  
300  
gaagtcaaag agcgtgatga cttggtgccc ttcacaggcg agaagaagg gaaaccctat  
360  
attcagccca agagggaaat ccagcagag gagcagatca ccctggagcc tgagctggag  
420  
gaggcactgg cacatgccac agatgctgaa atgtgtgaca ttgcagcaat tctggacatg  
480  
tacacactga tgagtaacaa gcaatactat gatgccctct gcagtggaga aatctgcaac  
540  
actgaaggca ttagcagtgt ggtacagcct gacaagtata agccagtgcc ggatgaaccc  
600  
ccaaatccca caaacattga ggagatacta aagagggtcc gaagcaatga caaggagctg  
660  
gaggaggtga acttgaataa tatacaggac atcccaatac ccagtctaag tgagctgtgt  
720  
gaggcaatga aggcaatac ctatgtgcgg agcttcagtc tggtagccac gaggagtgg  
780  
gacccattg ccaatgcagt ggctgacatg ttgcgtgaga atcgtagcct ccagagccta  
840  
aacatcgaat ccaacttcat tagcagcaca ggactcatgg ctgtgctgaa ggcagttcgg  
900  
gaaaatgcc cactcactga gctccgtgta gacaatcagc gccagtggcc tggatgatga  
960  
gtggagatgg agatggccac cgtgctagag cagtgtccct ctattgtccg ctttggctac  
1020  
cactttacac agcaggggcc acgagctcgg gcagcccagg ccatgaccgg aaacaatgaa  
1080  
ctacgtcgcc agcaaaagaa gagataacac tgcatttccc ttaccaact agcgtggga  
1140  
gcactggaca cttaaatcct catctgtcct cctttcctgt aaataaaagc ctttctatcc  
1200  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa  
1237

&lt;210&gt; 5728

&lt;211&gt; 368

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5728

Xaa Arg Arg Glu Val Thr Thr Arg Thr Gly Ser Val Ser Thr Thr Gln

1				5				10					15	
Trp	Glu	Gly	Val	Gly	Ala	Thr	Met	Ser	Ser	Tyr	Gln	Lys	Glu	Leu
			20					25					30	
Lys	Tyr	Arg	Asp	Ile	Asp	Glu	Asp	Glu	Ile	Leu	Arg	Thr	Leu	Ser
		35					40					45		
Glu	Glu	Leu	Glu	Gln	Leu	Asp	Cys	Glu	Leu	Gln	Glu	Met	Asp	Pro
	50					55				60				
Asn	Met	Leu	Leu	Pro	Ala	Gly	Leu	Arg	Gln	Arg	Asp	Gln	Thr	Lys
65					70					75				80
Ser	Pro	Thr	Gly	Pro	Leu	Asp	Arg	Glu	Ala	Leu	Leu	Gln	Tyr	Leu
			85					90					95	
Gln	Gln	Ala	Leu	Glu	Val	Lys	Glu	Arg	Asp	Asp	Leu	Val	Pro	Phe
			100					105					110	
Gly	Glu	Lys	Lys	Gly	Lys	Pro	Tyr	Ile	Gln	Pro	Lys	Arg	Glu	Ile
		115					120					125		
Ala	Glu	Glu	Gln	Ile	Thr	Leu	Glu	Pro	Glu	Leu	Glu	Glu	Ala	Leu
	130					135					140			
His	Ala	Thr	Asp	Ala	Glu	Met	Cys	Asp	Ile	Ala	Ala	Ile	Leu	Asp
145					150					155				160
Tyr	Thr	Leu	Met	Ser	Asn	Lys	Gln	Tyr	Tyr	Asp	Ala	Leu	Cys	Ser
			165					170					175	
Glu	Ile	Cys	Asn	Thr	Glu	Gly	Ile	Ser	Ser	Val	Val	Gln	Pro	Asp
			180					185				190		
Tyr	Lys	Pro	Val	Pro	Asp	Glu	Pro	Pro	Asn	Pro	Thr	Asn	Ile	Glu
		195					200					205		
Ile	Leu	Lys	Arg	Val	Arg	Ser	Asn	Asp	Lys	Glu	Leu	Glu	Glu	Val
	210					215						220		
Leu	Asn	Asn	Ile	Gln	Asp	Ile	Pro	Ile	Pro	Met	Leu	Ser	Glu	Leu
225					230					235				240
Glu	Ala	Met	Lys	Ala	Asn	Thr	Tyr	Val	Arg	Ser	Phe	Ser	Leu	Val
			245					250					255	
Thr	Arg	Ser	Gly	Asp	Pro	Ile	Ala	Asn	Ala	Val	Ala	Asp	Met	Leu
			260					265					270	
Glu	Asn	Arg	Ser	Leu	Gln	Ser	Leu	Asn	Ile	Glu	Ser	Asn	Phe	Ile
	275						280					285		
Ser	Thr	Gly	Leu	Met	Ala	Val	Leu	Lys	Ala	Val	Arg	Glu	Asn	Ala
	290					295						300		
Leu	Thr	Glu	Leu	Arg	Val	Asp	Asn	Gln	Arg	Gln	Trp	Pro	Gly	Asp
305					310					315				320
Val	Glu	Met	Glu	Met	Ala	Thr	Val	Leu	Glu	Gln	Cys	Pro	Ser	Ile
			325						330				335	
Arg	Phe	Gly	Tyr	His	Phe	Thr	Gln	Gln	Gly	Pro	Arg	Ala	Arg	Ala
			340					345				350		
Gln	Ala	Met	Thr	Arg	Asn	Asn	Glu	Leu	Arg	Arg	Gln	Gln	Lys	Lys
	355						360					365		

&lt;210&gt; 5729

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5729

naaattttatt actacggatc acagcagcaa cgggcgggaa gggcggcgcc agactcattt

60

gccccgcagg tagatcttgg gggctctgcca gccttcgggg gcttccttta gccccgcctt  
 120  
 cagccagatg cgcctcaggt ctttctcgaa cttgatctgc aagacgcaga gagagggacc  
 180  
 gccaagtaat tcgtggcaaa gaaacgtgtt ctcagcactt tgccctccca gggccaagca  
 240  
 gggggccact cacttgcttg cgtctcaggc gtccttcctg gaccttcctc cgcaggaacc  
 300  
 gcgtcttctt caccagcttc cgggtacttg ggtggttcat cttccgccgg cggatcttca  
 360  
 gcacgttttt gactaaatt t  
 381

&lt;210&gt; 5730

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5730

Phe	Val	Ala	Lys	Lys	Arg	Val	Leu	Ser	Thr	Leu	Pro	Ser	Gln	Gly	Gln
1			5						10				15		
Ala	Gly	Gly	His	Ser	Pro	Ala	Cys	Val	Ser	Gly	Val	Pro	Pro	Gly	Pro
			20					25				30			
Ser	Ser	Ala	Gly	Thr	Ala	Ser	Ser	Ser	Pro	Ala	Ser	Gly	Thr	Cys	Gly
		35				40					45				
Gly	Ser	Ser	Ser	Ala	Gly	Gly	Ser	Ser	Ala	Arg	Phe	Cys	Thr	Lys	Phe
50						55					60				

&lt;210&gt; 5731

&lt;211&gt; 891

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5731

cgggccgct ccaggtcgcg ggccgaagcc gggctcgggg cgctgccgcg gggggcgctc  
 60  
 gccagtact tgctcttctt gcggtctctac ccggtgctca ccaaggcggc caccagtggc  
 120  
 atttgtcag cacttgggaa ctctctggcc cagatgattg agaagaagcg gaaaaaagaa  
 180  
 aactctagaa gtctggatgt cgggtgggct ctgagatatg ccgtttacgg gttcttcttc  
 240  
 acagggccgc tgatcactt cttctacttc ttcattggaac attggatccc tctgaggtc  
 300  
 ccctggcag ggctcaggag gcttctcttg gaccgcctcg tctttgcacc ggccttcctc  
 360  
 atgttgttct tctcatcat gaactttctg gaggggaaag acgcctcagc ctctgccgcc  
 420  
 aagatgaggg ggggcttctg gccggcgctg aggatgaact ggcgggtgtg gacgccacta  
 480  
 cagttcatca acatcaacta cgtccctctg aagtccggg tgctcttcgc caacctggca  
 540  
 gctctgttct ggtatgccta cctggcctcc ttggggaagt gacgaccgct gggagaacat  
 600



cagggtgcact gtggacgtgg gtctgggggt ctcacccgcc cagcgagagc agaaccaatc  
 660  
 cagtcaggat gtcactgact ctaaatacagg tgattcaaga tgcccaaaaa tgatggatag  
 720  
 agaaacagaa atctctgaat gtcagaaccc tgtcttttaa aaaggcagtc actgccttca  
 780  
 ggtggtgctg cccagaaaac ttaaaattta gtcgaggcag tttcaattgt tactgtggac  
 840  
 cgaattagga tcacaataaa tgataatgca ggttcttcaa aaaaaaaaaa a  
 891

<210> 5732

<211> 193

<212> PRT

<213> Homo sapiens

<400> 5732

Pro	Ala	Ala	Ser	Arg	Leu	Arg	Ala	Glu	Ala	Gly	Leu	Gly	Ala	Leu	Pro
1			5					10						15	
Arg	Arg	Ala	Leu	Ala	Gln	Tyr	Leu	Leu	Phe	Leu	Arg	Leu	Tyr	Pro	Val
		20					25					30			
Leu	Thr	Lys	Ala	Ala	Thr	Ser	Gly	Ile	Leu	Ser	Ala	Leu	Gly	Asn	Phe
	35					40					45				
Leu	Ala	Gln	Met	Ile	Glu	Lys	Lys	Arg	Lys	Lys	Glu	Asn	Ser	Arg	Ser
	50					55					60				
Leu	Asp	Val	Gly	Gly	Pro	Leu	Arg	Tyr	Ala	Val	Tyr	Gly	Phe	Phe	Phe
65					70					75				80	
Thr	Gly	Pro	Leu	Ser	His	Phe	Phe	Tyr	Phe	Phe	Met	Glu	His	Trp	Ile
				85				90						95	
Pro	Pro	Glu	Val	Pro	Leu	Ala	Gly	Leu	Arg	Arg	Leu	Leu	Leu	Asp	Arg
		100					105						110		
Leu	Val	Phe	Ala	Pro	Ala	Phe	Leu	Met	Leu	Phe	Phe	Leu	Ile	Met	Asn
		115					120					125			
Phe	Leu	Glu	Gly	Lys	Asp	Ala	Ser	Ala	Phe	Ala	Ala	Lys	Met	Arg	Gly
	130					135						140			
Gly	Phe	Trp	Pro	Ala	Leu	Arg	Met	Asn	Trp	Arg	Val	Trp	Thr	Pro	Leu
145					150					155				160	
Gln	Phe	Ile	Asn	Ile	Asn	Tyr	Val	Pro	Leu	Lys	Phe	Arg	Val	Leu	Phe
			165				170							175	
Ala	Asn	Leu	Ala	Ala	Leu	Phe	Trp	Tyr	Ala	Tyr	Leu	Ala	Ser	Leu	Gly
		180					185						190		

Lys

<210> 5733

<211> 950

<212> DNA

<213> Homo sapiens

<400> 5733

nnccacgtcg tcattctccc cggggacggt gggagtggca cggccgccat cagcttcaca  
 60  
 ggggccttga aaattccagg cgtgatagag ttctcactgt gtctgctgtt tgccaagctg  
 120

gtcagctata ctttctctt ctggctgcc ctgtacatca cgaatgtgga tcaccttgat  
 180  
 gccaaaaagg cggggtgcac aggtagcccc gacctctca ggcattccag ccacagaaca  
 240  
 tcaaagttag cgagtactgc gctggctgtg gcttcagaga acctgtatgt gccacgtgga  
 300  
 aaaaacaggac accagagccc accagacagt gccggccagc agagaagcag agagccagcg  
 360  
 ccacacaaca tcaagaaggc cgacaaccag gttggaacc aagacggagc tcagacccac  
 420  
 cacatcgccc cagaggcttt tccagcacc atgatgttcc ggactgacct aaaaactaat  
 480  
 tgtcgagaag ccaagggtag ggaggcagga agcacctccg gttggaggca cccaggcttg  
 540  
 ccagccacag agcgcgccga agtcaccgtc atcccagccc ctggccttcc tgccgcctc  
 600  
 cggggccatg gcgctgctgt tcagctcagg cacaggggca cagcagaggt ttgggaagcg  
 660  
 gtctccccc cggcactggg attggcgggt ccaagcccag caaccggctt cgctccacaa  
 720  
 cacacaccac acctgggact gtttttaata catagcaaca gactgggtta tttatttaag  
 780  
 atgtgtattg tgtcatatga agtttaagag acataaatgg cattttgtta tttattaaga  
 840  
 caaactccaa ttgttctctg gctgtttttt tcagttgtgt ctagcaaaat acttatctgc  
 900  
 cctttgaaat aaaatgtttt tgtttaaaaa atctcaaaaa aaaaaaaaaa  
 950

&lt;210&gt; 5734

&lt;211&gt; 82

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5734

Xaa	His	Val	Val	Ile	Leu	Pro	Gly	Asp	Gly	Gly	Ser	Gly	Thr	Ala	Ala
1				5					10					15	
Ile	Ser	Phe	Thr	Gly	Ala	Leu	Lys	Ile	Pro	Gly	Val	Ile	Glu	Phe	Ser
			20					25					30		
Leu	Cys	Leu	Leu	Phe	Ala	Lys	Leu	Val	Ser	Tyr	Thr	Phe	Leu	Phe	Trp
		35					40					45			
Leu	Pro	Leu	Tyr	Ile	Thr	Asn	Val	Asp	His	Leu	Asp	Ala	Lys	Lys	Ala
		50				55					60				
Gly	Cys	Thr	Gly	Ser	Pro	Asp	Pro	Leu	Arg	His	Ser	Ser	His	Arg	Thr
65					70				75					80	
Ser	Lys														

&lt;210&gt; 5735

&lt;211&gt; 4241

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5735

ctagaattca gcggcgctg aattctagcg agcaggcggc aggcacggtc cgtgcggagc  
60  
aggcgagcga gcggaagac gcagccacct tctcaccag ccagcccaca gcggtttggt  
120  
ccccttctcg ggagtgcgc aatgcctggg ccgacccaaa ccctgtcccc aaatggcgag  
180  
aacaacaacg acatcatcca ggataataac gggaccatca ttcctttccg gaagcacaca  
240  
gtgcgcgggg agcgttccta cagttgggga atggcggtca atgtgtattc tacctcgata  
300  
accaagaga ctatgagcag acatgacatc attgcatggg ttaatgacat agtatcttta  
360  
aactacacaa aagtgaaca gctttgttca ggagcggcct attgccaatt catggacatg  
420  
ctcttcctcg gctgcattag tttgaagaaa gtaaaatttc aagcaaagct ggaacatgaa  
480  
tatattcaca attttaaaact tctgcaagca tcatttaagc gaatgaacgt tgataaggta  
540  
attccagtgg agaagctagt gaaaggacgt ttccaggaca acctggattt tattcaatgg  
600  
tttaagaaat tctatgatgc taactacgat gggaaggagt atgatcctgt agaggcacga  
660  
caagggcaag atgcaattcc tctcctgac cctgggtgaac agatcttcaa cctgccaaaa  
720  
aagtctcacc atgcaaaact cccacagca ggtgcagcta aatcaagtcc agcagctaaa  
780  
ccaggatcca caccttctcg accctcatca gccaaaaggg cttcttccag tggctcagca  
840  
tccaaatccg ataaagattt agaaacgcag gtcatacagc ttaatgaaca ggtacattca  
900  
ttaaacttg cccttgaagg cgtggaaaag gaaagggatt tctactttgg gaagttgaga  
960  
gagatcgagc tactctgcca agaacacggg caggaaaatg atgacctgt gcagagacta  
1020  
atggacatcc tgtatgcttc agaagaacac gagggccaca cagaagagcc ggaagcagag  
1080  
gagcaagccc acgaacagca gccccgcag caggaagagt actgaccac cccggtgct  
1140  
cttgacactt ccattgtgtg tgggaacgtt tcttctggag aattggaaca tgtgtggccc  
1200  
caagctcaac agaaaccagt tgttcccaat ctgccgttac catcaacgca ctgttgata  
1260  
tgccagccac tgcgttggg tccattttc tttgccaagg tgtattagcg gacggccctc  
1320  
tgccaccta cccgagagat cgtagggtca catacatcca acttcaccac ttggctgctt  
1380  
gagattgggt ctgctctttt cttcatttct ttccagaaca actctttccc accccaacac  
1440  
cactgccacc accctctttt ttatcctggg gtgaaacaat ggtaatttga tatatggat  
1500  
ttatattggc atttttcaac ccagtgtcac tagatgtcac acacatttgt ggtgcttga  
1560  
tgtttgcaag tctaacctct gaacataaat ttgggtcaaat aattggaaca aagggaaca  
1620

gatacttgat atgaaagcca taatgacggt gacttgtgtc gtgggggaaa acataaggtc  
1680  
attttctccc tctactcaca atactaaagg gaaaaaatgg attcaaagct aggatttcag  
1740  
ggcccagcag tgttctctca tcagcatggt agacaactac acagtatggt gttagttttg  
1800  
aaagacattc actcaaggaa aacaccatct caactttgcc cgctcaccat gtcccttgcc  
1860  
cccatgtagc ccatttccca ggttatgtct ttttctttct cagggctctc tttggtgggc  
1920  
agccactccc cgagatggtg ccatcagttt tctgcagtc aaagagggta tgggttaggta  
1980  
cgggtcttcc tgctcattc ctcttctct tttgttaggt ttcagccaca aaactgtcat  
2040  
tcactctagg ggacccctac taaagggtaa cttcaggtgt gcagccctga gctccaaggc  
2100  
tctgcaccat gccacacact tgctgtaagg ctagaagtga agaccttatt aataggagca  
2160  
taattgcgag ggagaatcat ggttctgcag tctggtgtag aacttggaat aacagcacag  
2220  
aaaaatctat gactcccaat atcttctaga ataaagaatt ttccctcttt aacacaaggg  
2280  
ccctccttgt cattgacctt agctaaacca tggcaattca taaatagagg aaacattaat  
2340  
gaattaaaag cattccttat tttttaacta atatttgtac attttcttag tctctttcca  
2400  
agtctttgcc tctttttttt ctttattttt atttttctct ttgacagatg gtatcccttc  
2460  
ctggatcatt catttcacct tggtttctaa ctttaggttt actttcactt gttatttgac  
2520  
ttagcagggtg caacaaaaac aagaaacaaa tgtgcccacc ccactttccg cttaactgaa  
2580  
aagcttaaaa taaatttctg aattatgtat cctgaagctt tgaaatttct ttattaatcg  
2640  
atgaaatatg aattctaaat tctagcattg aagcttttca ccaaaagaag tctctccaaa  
2700  
ataaatcttt tgcagcaaag tgatatttat tgagttatgt ggaaaagatg gcttgatatt  
2760  
ttcagattat tacaacacac tgtgcagaat tagacagatg ttccgtgggtg tttggtttcc  
2820  
ctttcttctc tctctgtctc actctgcatt atagcagcag cttatttctc taaggctgga  
2880  
cagcctggct ctgggcagtg acgtcctccc acacctggct acaagtagta gtggctgtgc  
2940  
tataccagc atcatgttta acagcgtgtt gcccttctga gcctgttgta ctactgatc  
3000  
tctttaaaaa caaaaaatag ctcttgtaaa aggtcacaat aactctatgc acctgatact  
3060  
gcagtgggtc ctaggccatt cttcatctgc tctggacatc tcagtcatac ccaatgctca  
3120  
gtggatcatg accaaactcc tgtcatgtgg atgcacgtga gtgggtagca gggagtcagg  
3180  
atcctgcctt ctccagcaac cccttactgc tgtataactt gcataagcct ccctgggtgac  
3240

tcttgcagga accactccat tgcctccag ctcccagcc ttctcagtta taaacatgct  
 3300  
 ggccagatct cttagcctgc aaagagaact ttcccagtc accatagacc attctccttc  
 3360  
 ctgaaggctt ggggcagacc attcgtttat ttagagaaga gctatacatt cttctttctg  
 3420  
 gtcccatctt aaacgtcttc tgttgctg caccacagat ggtgtctcag atgctttggg  
 3480  
 gaatctttaa cagctgaatt tgagtcagtc ctcttaggct gcacctccag cctctgcaga  
 3540  
 tccccctca ttcccatgg atgggtgggac cccattatc tctcatctcg gcattcaggg  
 3600  
 aacagtttcc ttageggccc ctggtcacat gtcacgggc tgggcaggaa gcgtccctgg  
 3660  
 gtgcgtgctc cacttctccc tctcaggaag ccagtttca tccttagtac cccccctcgt  
 3720  
 gcccgctgct ggctggttat agcacttcca ctgctactgt cagataggaa gtgatcgaag  
 3780  
 cagggggcaa agagaaagcc catatttggt ctaagcagaa aagcaggaaa aaaaaaaaaa  
 3840  
 aagaaagaaa aacacctgtt gacctgagag aagtaaattc cagaagggaa ccaagaactc  
 3900  
 ttcccttccc tggtgagtat ttccattatt ccgttaagg ttaatatgca ttcagattac  
 3960  
 ttttactaaa taggacacca taaagctttt gttatatatt aaatgtaaac tgaaggaat  
 4020  
 gtaaacatat gtattgtaa ttataaatat agataagtaa tgacataata gatgaaaaag  
 4080  
 tcttattcag atgtatcaca ttcattttac attaccacc tattgtcgca tggtagaata  
 4140  
 gttttttgct tctgaatatg tgaataactt gacttgcatt gatcttttta catattta  
 4200  
 aaaaaaaaaa gtatatgtta aaaaaaaaaa aaaaaaaaaa a  
 4241

&lt;210&gt; 5736

&lt;211&gt; 327

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5736

Met	Pro	Gly	Pro	Thr	Gln	Thr	Leu	Ser	Pro	Asn	Gly	Glu	Asn	Asn	Asn
1				5					10					15	
Asp	Ile	Ile	Gln	Asp	Asn	Asn	Gly	Thr	Ile	Ile	Pro	Phe	Arg	Lys	His
			20					25					30		
Thr	Val	Arg	Gly	Glu	Arg	Ser	Tyr	Ser	Trp	Gly	Met	Ala	Val	Asn	Val
		35					40				45				
Tyr	Ser	Thr	Ser	Ile	Thr	Gln	Glu	Thr	Met	Ser	Arg	His	Asp	Ile	Ile
	50					55					60				
Ala	Trp	Val	Asn	Asp	Ile	Val	Ser	Leu	Asn	Tyr	Thr	Lys	Val	Glu	Gln
65				70					75					80	
Leu	Cys	Ser	Gly	Ala	Ala	Tyr	Cys	Gln	Phe	Met	Asp	Met	Leu	Phe	Pro
			85					90					95		
Gly	Cys	Ile	Ser	Leu	Lys	Lys	Val	Lys	Phe	Gln	Ala	Lys	Leu	Glu	His

100 105 110  
 Glu Tyr Ile His Asn Phe Lys Leu Leu Gln Ala Ser Phe Lys Arg Met  
 115 120 125  
 Asn Val Asp Lys Val Ile Pro Val Glu Lys Leu Val Lys Gly Arg Phe  
 130 135 140  
 Gln Asp Asn Leu Asp Phe Ile Gln Trp Phe Lys Lys Phe Tyr Asp Ala  
 145 150 155 160  
 Asn Tyr Asp Gly Lys Glu Tyr Asp Pro Val Glu Ala Arg Gln Gly Gln  
 165 170 175  
 Asp Ala Ile Pro Pro Pro Asp Pro Gly Glu Gln Ile Phe Asn Leu Pro  
 180 185 190  
 Lys Lys Ser His His Ala Asn Ser Pro Thr Ala Gly Ala Ala Lys Ser  
 195 200 205  
 Ser Pro Ala Ala Lys Pro Gly Ser Thr Pro Ser Arg Pro Ser Ser Ala  
 210 215 220  
 Lys Arg Ala Ser Ser Ser Gly Ser Ala Ser Lys Ser Asp Lys Asp Leu  
 225 230 235 240  
 Glu Thr Gln Val Ile Gln Leu Asn Glu Gln Val His Ser Leu Lys Leu  
 245 250 255  
 Ala Leu Glu Gly Val Glu Lys Glu Arg Asp Phe Tyr Phe Gly Lys Leu  
 260 265 270  
 Arg Glu Ile Glu Leu Leu Cys Gln Glu His Gly Gln Glu Asn Asp Asp  
 275 280 285  
 Leu Val Gln Arg Leu Met Asp Ile Leu Tyr Ala Ser Glu Glu His Glu  
 290 295 300  
 Gly His Thr Glu Glu Pro Glu Ala Glu Glu Gln Ala His Glu Gln Gln  
 305 310 315 320  
 Pro Pro Gln Gln Glu Glu Tyr  
 325

&lt;210&gt; 5737

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5737

ncaccccccc tggatgtggc tcttcggata tgcctttccc acggagccca gagacaaatg  
 60

tgcgtggccc tgggacagct ggaccggcct ccagacctcg cccatgacgg gaggagtctg  
 120

tggctgaaca tcaggggcaa ggaggcggct gcccaatcca tgttccatgt ctccacgcca  
 180

ctgccagtga tgaccggtgg tttcctgatg tacctgagag ggcagctgga gcctcagtgg  
 240

aagatgttgc agtgccatcc tcacctggtg gcttgaaatc ggccaagggtg ggagcattta  
 300

caccgcagaa atgacaccgc acgccagcgc cccgcggccg  
 340

&lt;210&gt; 5738

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5738

Met Leu Pro Pro Trp Pro Ile Ser Ser His Gln Val Arg Met Ala Leu  
 1 5 10 15  
 Gln His Leu Pro Leu Arg Leu Gln Leu Pro Ser Gln Val His Gln Glu  
 20 25 30  
 Thr Thr Gly His His Trp Gln Trp Arg Gly Asp Met Glu His Gly Leu  
 35 40 45  
 Gly Ser Arg Leu Leu Ala Pro Asp Val Gln Pro Gln Thr Pro Pro Val  
 50 55 60  
 Met Gly Glu Val Trp Arg Pro Val Gln Leu Ser Gln Gly His Ala His  
 65 70 75 80  
 Leu Ser Leu Gly Ser Val Gly Lys Ala Tyr Pro Lys Ser His Ile Gln  
 85 90 95  
 Gly Gly Xaa

&lt;210&gt; 5739

&lt;211&gt; 780

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5739

actttcataa ttgtaacatt gaaatcttta atctggaata tgtactggca taaagagtga  
 60  
 ggcacataca tggctttact attttcaga gggccaactg cttttactga ataattccatt  
 120  
 ttactcggtta attggaacaa cctctagcct gtactaaatt tccatattta tttggcccggt  
 180  
 ttcaaagtcc tctattctct gctcatctgt ccacatctaa gtgctttaac tattgtggct  
 240  
 ttataaaata ttccaatatt ccataggacc ttatccttag tacttcctat tttaaagttt  
 300  
 tccttgacga caggtacttt aaataccatc tcacagcacc catcatgtcc tatcttcagg  
 360  
 aaataaaatc tctgggtatt tccaaggga gtgaaggact gacaccatga ttagaaagca  
 420  
 gagccagcac catggcccggt cctgagcat gtccagcaaa ccctgccagg ctctgcagct  
 480  
 cctgagcacc ctgccttcgg gtctgccagt gtgtgggggc cagaagagaa aaacaaccca  
 540  
 gggggaatgc ctcttcccc cagcaggaaa gcagcttgggt catcatctgt ctgaaagcag  
 600  
 gtgctgcagc agctggcaac aaagccactc tgaaaggagc tgtgtgcact gcctgtctgg  
 660  
 aagggcatgc cagagtccat cgttgccctc accctacctg tgcaggaaac ctggacatca  
 720  
 ccacttcaag gccctacctt cttttctggg cagagcccaa ccacaataaa caggacgcgt  
 780

&lt;210&gt; 5740

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5740

```

Met Ile Arg Lys Gln Ser Gln His His Gly Pro Ser Leu Ser Met Ser
 1           5           10           15
Ser Lys Pro Cys Gln Ala Leu Gln Leu Ser Thr Leu Pro Ser Gly
      20           25           30
Leu Pro Val Cys Gly Gly Gln Lys Arg Lys Thr Thr Gln Gly Glu Cys
      35           40           45
Leu Leu Pro Pro Ala Gly Lys Gln Leu Gly His His Leu Ser Glu Ser
      50           55           60
Arg Cys Cys Ser Ser Trp Gln Gln Ser His Ser Glu Arg Ser Cys Val
      65           70           75           80
His Cys Leu Ser Gly Arg Pro Cys Gln Ser Pro Ser Leu Pro Pro Pro
      85           90           95
Tyr Leu Cys Arg Lys Pro Gly His His His Phe Lys Ala Leu Pro Ser
      100          105          110
Phe Leu Gly Arg Ala Gln Pro Gln
      115          120

```

&lt;210&gt; 5741

&lt;211&gt; 2444

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5741

```

ggcggctgct gctccgggcc tgggcacagc aagcggcgac gtcaagctcc cggggttggc
60
gcgggttgccg ggggcagtcc cgagcgtgag gaggtcggcg caggctacaa cagtgaggac
120
gagtatgagg cggctgcagc acgcacgcag gctatggacc ctgccactgt cgagcagcag
180
gagcattggt ttgaaaaggc cctacgagac aagaagggtc tcatcatcaa gcagatgaag
240
gaggatggcg cctgtctctt cggggtgta gctgaccagg tgtatggaga ccaggacatg
300
catgagggtt tgcgaaagca ttgcatggac tatctgatga agaatgccga ctacttctcc
360
aactatgtca cagaggactt taccacctac attaacagga agcggaaaaa caattgccat
420
ggcaaccaca ttgagatgca ggccatggca gagatgtaca accgtcctgt ggaggtgtac
480
cagtacagca cagaacccat caacacattc catgggatac atcaaaacga ggacgaaccc
540
attcgtgtta gctaccatcg gaatatccac tataattcag tggatgaatcc taacaaggcc
600
accattggtg tggggctggg cctgccatca ttcaaaccag ggtttgcaga gcagtctctg
660
atgaagaatg ccataaaaac atcggaggag tcatggattg aacagcagat gctagaagac
720
aagaaacggg ccacagactg ggaggccaca aatgaagcca tcgaggagca ggtggctcgg
780
gaatcctacc tgcagtgggt gcgggatcag gagaaacagg ctgccagggt ccgaggcccc
840
agccagcccc ggaaagccag cgccacatgc agttcggcca cagcagcagc ctccagtggc
900

```



ctggaggagt ggactagccg gtccccgagg cagcggagtt cagcctcgtc acctgagcac  
960  
cctgagctgc atgctgaatt gggcatgaag ccccttccc caggeactgt tttagctctt  
1020  
gccaaacctc cttcgccctg tgcgccaggt acaagcagtc agttctcggc aggggcccagc  
1080  
cgggcaactt ccccccttgt gtccctctac cctgctttgg agtgccgggc cctcattcag  
1140  
cagatgtccc cctctgcctt tggctcgaat gactgggatg atgatgagat cctagcttcg  
1200  
gtgctggcag tgtcccaaca ggaataccta gacagtatga agaaaaacaa agtgcacaga  
1260  
gacccgcccc cagacaagag ttgatggaga cccagggatt ggacaccatc tcccaacccc  
1320  
agtactctg ctctccgtg ccacctcacc ttctttggct tcttccctct tgccctcttc  
1380  
tgttctttct gctctccctt cttttccctc ctctcactt cctctggct agcccaaccc  
1440  
tgactctct ctcattgccg ctgccactat cactgtctc tctgccagct gatgtgccct  
1500  
gttgcccccc acccatccc gcacagaacc atccctgcat tccacagggg actcgggcaa  
1560  
gggtgccgaa gatagacaag aggcacacag agacagacca actggcagcc aggcagcccc  
1620  
agaggagaga gacattcaga cagaggaaag tctccctgcc cctcattcct tccaagatga  
1680  
gaaaaacttg ccgccacccc ccgacactga tgccagggag gtggggaggaa gaagtgggaa  
1740  
atttcccttc ccagtacccc caagaacgtc tgagccttca atgttgaatt ttttctttat  
1800  
taaaattact tttatcttat aaaatcaact aatcaaaaat gatatagacg acagcactgg  
1860  
ctctgtgaag gtggcatctt tctgggcagg caggccatgg ggcattggagg agggtgcaaa  
1920  
gatattgggt gctgtcttct ggcctccagc tgcatggagg ccggcccagg gtctaggggt  
1980  
tgactgggc aagggcaggg cggcaggtgt caggccggct tggacaatga aaccctgacc  
2040  
ttgctgcatt ccttttgctt ccaccaccac tagcttcttt ggaatcttgg ggtgggggtc  
2100  
atctttgggg attatggctg ccaccggga tttgagtgtg gggagtgtgg gacagcctt  
2160  
ggcagatggg gcacccgtgc cctgcagggt ttgacaagat ccgccatctg taatgtcctt  
2220  
ggcacaataa aaccaaagt cagtttccct gagcgactct gttctgtgtg gggcaggggt  
2280  
tgggcgggccc tctgggcaga ggaatgcaatg gcacggacct tggcttgacc tcagaggtgt  
2340  
gaatgtctc cagcagggtc tgtctggggg cctggagttt gtatttgatt tgctgcttat  
2400  
taaacctcct tctggaccta ttgccactgg aaaaaaaaaa aaaa  
2444

&lt;210&gt; 5742

&lt;211&gt; 427

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5742

Gly Gly Cys Cys Ser Gly Pro Gly His Ser Lys Arg Arg Arg Gln Ala  
 1 5 10 15  
 Pro Gly Val Gly Ala Val Gly Gly Gly Ser Pro Glu Arg Glu Glu Val  
 20 25 30  
 Gly Ala Gly Tyr Asn Ser Glu Asp Glu Tyr Glu Ala Ala Ala Ala Arg  
 35 40 45  
 Ile Glu Ala Met Asp Pro Ala Thr Val Glu Gln Gln Glu His Trp Phe  
 50 55 60  
 Glu Lys Ala Leu Arg Asp Lys Lys Gly Phe Ile Ile Lys Gln Met Lys  
 65 70 75 80  
 Glu Asp Gly Ala Cys Leu Phe Arg Ala Val Ala Asp Gln Val Tyr Gly  
 85 90 95  
 Asp Gln Asp Met His Glu Val Val Arg Lys His Cys Met Asp Tyr Leu  
 100 105 110  
 Met Lys Asn Ala Asp Tyr Phe Ser Asn Tyr Val Thr Glu Asp Phe Thr  
 115 120 125  
 Thr Tyr Ile Asn Arg Lys Arg Lys Asn Asn Cys His Gly Asn His Ile  
 130 135 140  
 Glu Met Gln Ala Met Ala Glu Met Tyr Asn Arg Pro Val Glu Val Tyr  
 145 150 155 160  
 Gln Tyr Ser Thr Glu Pro Ile Asn Thr Phe His Gly Ile His Gln Asn  
 165 170 175  
 Glu Asp Glu Pro Ile Arg Val Ser Tyr His Arg Asn Ile His Tyr Asn  
 180 185 190  
 Ser Val Val Asn Pro Asn Lys Ala Thr Ile Gly Val Gly Leu Gly Leu  
 195 200 205  
 Pro Ser Phe Lys Pro Gly Phe Ala Glu Gln Ser Leu Met Lys Asn Ala  
 210 215 220  
 Ile Lys Thr Ser Glu Glu Ser Trp Ile Glu Gln Gln Met Leu Glu Asp  
 225 230 235 240  
 Lys Lys Arg Ala Thr Asp Trp Glu Ala Thr Asn Glu Ala Ile Glu Glu  
 245 250 255  
 Gln Val Ala Arg Glu Ser Tyr Leu Gln Trp Leu Arg Asp Gln Glu Lys  
 260 265 270  
 Gln Ala Arg Gln Val Arg Gly Pro Ser Gln Pro Arg Lys Ala Ser Ala  
 275 280 285  
 Thr Cys Ser Ser Ala Thr Ala Ala Ser Ser Gly Leu Glu Glu Trp  
 290 295 300  
 Thr Ser Arg Ser Pro Arg Gln Arg Ser Ser Ala Ser Ser Pro Glu His  
 305 310 315 320  
 Pro Glu Leu His Ala Glu Leu Gly Met Lys Pro Pro Ser Pro Gly Thr  
 325 330 335  
 Val Leu Ala Leu Ala Lys Pro Pro Ser Pro Cys Ala Pro Gly Thr Ser  
 340 345 350  
 Ser Gln Phe Ser Ala Gly Ala Asp Arg Ala Thr Ser Pro Leu Val Ser  
 355 360 365  
 Leu Tyr Pro Ala Leu Glu Cys Arg Ala Leu Ile Gln Gln Met Ser Pro  
 370 375 380  
 Ser Ala Phe Gly Leu Asn Asp Trp Asp Asp Asp Glu Ile Leu Ala Ser



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5745

```

aaagtttttt ttttttctg cttcaggcac acggggaacc acgcgtttta atcaacgtat
60
cgataaaaaa caccagggca cggacactcc aggggaaatg cttattgagt aaagtatccg
120
aggaagtgat gcagggcagg taaacagctg gtgctcagca gcgagaggac gcgtcactct
180
gccgttctgc agggtgacgc cctccccgta cctcgctgag agccacctgc agacacagca
240
ggccacagca gaatgcacag gtcactgttg taggggaaca aatcgtaatg cccagagaaa
300
acctgatagt gaaatgtaaa cagacaggac aggggtggttc caggtggcca ccaccgccag
360
gcccttcccg tgattgatct gagagcttca cagccggcgg cactgggacc catttcaga
420
aacactggaa caccaggtct ctcagatgcc cgcgggaggg gccccaggga ggcccttctc
480
agcatcagct tttgggtgac aaaccccata cagcaaaact gtacaaatac acacaacgga
540
ccccagctg acagtgagac caggacccta ggaaggtcag gtggtggtga agtcatcccc
600
tctccaaccg agcagagcct ggggttgggc tctgatgacc tcccgggcaa agtgtccagg
660
tggaggaagc aaactcccaa atggggcaca aaggtaataa aaagcagctg agagattgag
720
ggatggggtc ggggccactt ggccgacacc ttctgcctcg cctggccggg ccggggccagc
780
ctctcgccac aggatggagg gtgactgtgc acctgctcc atgtacagga cgggttgagg
840
gtcccatgg
849

```

&lt;210&gt; 5746

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5746

```

Met Thr Ser Pro Pro Pro Asp Leu Pro Arg Val Leu Val Ser Leu Ser
 1             5             10             15
Ala Gly Gly Pro Leu Cys Val Phe Val Gln Phe Cys Cys Met Gly Phe
      20             25             30
Val Thr Gln Lys Leu Met Leu Arg Lys Ala Ser Leu Gly Pro Leu Pro
      35             40             45
Arg Ala Ser Glu Arg Pro Gly Val Pro Val Phe Leu Glu Met Gly Pro
      50             55             60
Ser Ala Ala Gly Cys Glu Ala Leu Arg Ser Ile Thr Gly Arg Ala Trp
65             70             75             80
Arg Trp Trp Pro Pro Gly Thr Thr Leu Ser Cys Leu Phe Thr Phe His
      85             90             95
Tyr Gln Val Phe Ser Gly His Tyr Asp Leu Phe Pro Tyr Asn Ser Asp

```

	100		105		110
Leu	Cys	Ile	Leu	Leu	Trp
			Pro	Ala	Val
			Ser	Ala	Gly
			Gly	Gly	Ser
			Gln	Arg	
	115		120		125
Gly	Thr	Gly	Arg	Ala	Ser
			Pro	Cys	Arg
			Thr	Ala	Glu
	130		135		140

&lt;210&gt; 5747

&lt;211&gt; 1999

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5747

```

nccatggccc agtccggcgg ggaggctcgg cccgggccc agacggcggg gcagatccgc
60
gtcgccatcc aggaggccga ggacgtggac gaggtaggag acgaggagga gggggcggag
120
actcggggcg cgggggaccc ggcccgttac ctacgccccg gctggggcag cgcgagcgag
180
gaggagccga gccgcgggca cagtggcacc actgcaagtg gaggtgagaa cgagcgtgag
240
gacctggagc aggagtggaa gccccggat gaggagttag tcaagaaact ggtggatcag
300
atcgaattct acttttctga tgaaaacctg gagaaggacg cctttttgct aaaacacgtg
360
aggaggaaca agctgggata tgtgagcggt aagctactca catccttcaa aaagggtgaaa
420
catcttacac gggactggag aaccacagca catgctttga agtattcagt ggtccttgag
480
ttgaatgagg accaccggaa ggtgaggagg accacccccg tccactgtt cccaacgag
540
aacctcccc gcaagatgct cctggtctat gatctctact tgtctcctaa gctgtgggct
600
ctggccaccc ccagaagaa tggaagggtg caagagaagg tgatggaaca cctgctcaag
660
cttttcggga cttttggagt catctcatca gtgcggatcc tcaaacctgg gagagagctg
720
ccccctgaca tccggaggat cagcagccgc tacagccaag tggggaccca ggagtgtgcc
780
atcgtggagt tcgaggaggt ggaagcagcc atcaaagccc atgagttcat gatcacagaa
840
tctcagggca aagagaacat gaaagctgtc ctgattggta tgaagccacc caaaaagaaa
900
cctgccaaag acaaaaatca tgacgaggag cccactgcga gcatccacct gaacaagtc
960
ctgaacaaga gactcgagga gcttcagtac atgggtgatg agtcttctgc caacagctcc
1020
tctgaccccc agagcaaccc cacatccct atggcgggccc gacggcacgc ggccaacca
1080
aagctcagcc cgtctggcca ccagaatctc tttctgagtc caaatgcctc cccgtgcaca
1140
agtccttgga gcagccccct ggccaacgc aaaggcgttt ccagaaagtc cccactggcg
1200
gaggaaggta gactgaactg cagcaccagc cctgagatct tccgcaagtg tatggattat
1260

```

tcctctgaca gcagcgtcac tccctctggc agccctctggg tccggaggcg tcgccaagcc  
 1320  
 gagatgggga cccaggagaa aagccccggg acgagtcctcc tgctctcccg gaagatgcag  
 1380  
 actgcagatg ggctacccgt aggggtgctg aggttgccca ggggtcctga caacaccaga  
 1440  
 ggatttcctg gccatgagag gagcagggcc tgtgtataaa taccttctat ttttaataca  
 1500  
 agtccactg aaaaccacct tcgttttcaa ggttctgaca aacacctggc atgacagaat  
 1560  
 ggaattcggt cccctttgag agatttttta ttcattgtaga cctcttaatt tatctatctg  
 1620  
 taatatacat aaatcggtac gccatgggtt gaagaccacc ttctagttca ggactcctgt  
 1680  
 tcttcccagc atggccacta ttttgatgat ggctgatgtg tgtgagtgtg atggccctga  
 1740  
 agggctgtag gacggagggt cccctggggga agtctgttct ttggtatgga atttttctct  
 1800  
 cttcttttgt atggaatttt tcccttcagt gactgagctg tctctgatag gccatgcaag  
 1860  
 ggcttcctga gagttcagga aagttctctt gtgcaacagc aagtagctaa gcctatagca  
 1920  
 tgggtgtctt taggacaaaa tcgatgttac ctgtcaagta aataaataat aaaacaccca  
 1980  
 aaaaaaaaaa aaaaaaaaaa  
 1999

&lt;210&gt; 5748

&lt;211&gt; 492

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5748

Xaa	Met	Ala	Gln	Ser	Gly	Gly	Glu	Ala	Arg	Pro	Gly	Pro	Lys	Thr	Ala
1			5						10					15	
Val	Gln	Ile	Arg	Val	Ala	Ile	Gln	Glu	Ala	Glu	Asp	Val	Asp	Glu	Leu
			20					25				30			
Glu	Asp	Glu	Glu	Glu	Gly	Ala	Glu	Thr	Arg	Gly	Ala	Gly	Asp	Pro	Ala
			35				40					45			
Arg	Tyr	Leu	Ser	Pro	Gly	Trp	Gly	Ser	Ala	Ser	Glu	Glu	Glu	Pro	Ser
			50			55					60				
Arg	Gly	His	Ser	Gly	Thr	Thr	Ala	Ser	Gly	Gly	Glu	Asn	Glu	Arg	Glu
65					70					75				80	
Asp	Leu	Glu	Gln	Glu	Trp	Lys	Pro	Pro	Asp	Glu	Glu	Leu	Ile	Lys	Lys
			85						90					95	
Leu	Val	Asp	Gln	Ile	Glu	Phe	Tyr	Phe	Ser	Asp	Glu	Asn	Leu	Glu	Lys
			100					105					110		
Asp	Ala	Phe	Leu	Leu	Lys	His	Val	Arg	Arg	Asn	Lys	Leu	Gly	Tyr	Val
			115				120					125			
Ser	Val	Lys	Leu	Leu	Thr	Ser	Phe	Lys	Lys	Val	Lys	His	Leu	Thr	Arg
			130			135					140				
Asp	Trp	Arg	Thr	Thr	Ala	His	Ala	Leu	Lys	Tyr	Ser	Val	Val	Leu	Glu
145					150					155				160	
Leu	Asn	Glu	Asp	His	Arg	Lys	Val	Arg	Arg	Thr	Thr	Pro	Val	Pro	Leu

```
<210> 5749
<211> 2849
<212> DNA
<213> Homo sapiens
```

```
<400> 5749
gggtgagacg gtgggttgta tggagagaat gtgactgtac atttttataa gcaggactaa
60
cccaggaaaag aggaaaaaat acattttaaca gtgaagaggc aacacagagc tccctattgt
120
gaaataaaac ccatttcaaa agttattgga aagaaagtaa ggtatggctc ttatggggtta
180
```

actagtggta gtcagtttct gctttttact ccctctgaat tattaattgt ttgccaggtt  
240  
cactgggtggg aggctgagcc ggtggaaaag acaccgggaa gagactcaga ggcgaccata  
300  
atgtcgttac gtgtacacac tctgcccacc ctgcttgag cgcctcgcag accgggctgc  
360  
aggagctgc tgtgtttgct gatgatcaca gtgactgtgg gccctgggct ctctgggggtg  
420  
tgccccaccg cttgcatctg tgccactgac atcgtcagct gcaccaacaa aaacctgtcc  
480  
aagggtgacct ggaacctttt cagactgatt aagagactgg acctgagtta taacagaatt  
540  
gggtttctgg attctgagtg gattccagta tctgttgcaa agctgaacac cctaattctt  
600  
cgtcataaca acatcaccag catttccacg ggcagttttt ccacaactcc aaatttgaag  
660  
tgtcttgact tatcgtccaa taagctgaag acggtgaaaa atgctgtatt ccaagagttg  
720  
aagggttctgg aagtgttct gctttacaac aatcacatat cctatctcga tcttcagcg  
780  
tttgaggggc tctcccagtt gcagaaactc tacttaagt gaaattttct cacacagttt  
840  
ccgatggatt tgtatgttg aaggttcaag ctggcagaac tgatgtttt agatgtttct  
900  
tataaccgaa ttcttccat gccaatgcac cacataaatt tagtgccagg aaaacagctg  
960  
agaggcatct accttcattg aaacctatt gtctgtgact gtccctgtg ctccttgctg  
1020  
gtcttttggt atcgtaggca ctttagctca gtgatggatt ttaagaacga ttacacctgt  
1080  
cgctgtggt ctgactccag gcactcgcgt caggtaactc tgctccagga tagctttatg  
1140  
aattgctctg acagcatcat caatggttcc tttcgtgcgc ttggctttat tcatgagget  
1200  
caggtcgggg aaagactgat ggtccactgt gacagcaaga caggtaatgc aaatacggat  
1260  
ttcatctggg tgggtccaga taacagactg ctagagccgg ataaagagat ggaaaacttt  
1320  
tacgtgtttc acaatggaag tctgggtata gaaagccctc gttttgagga tgctggagtg  
1380  
tattcttgta tgcgaatgaa taagcaacgc ctgttaaatg aaactgtgga cgtcacaata  
1440  
aatgtgagca atttcaactg aagcagatcc catgctcatg aggcatttaa cacagctttt  
1500  
accactcttg ctgcttgcgt ggccagtatc gttttggtac ttttgtacct ctatctgact  
1560  
ccatgcccct gcaagtgtaa aaccaagaga cagaaaaata tgctacacca aagcaatgcc  
1620  
cattcatcga ttctcagtcc tggccccgct agtgatgcct ccgctgatga acggaaggca  
1680  
ggtgcaggta aaagagtggg gtttttgga cccctgaagg atactgcagc agggcagaac  
1740  
gggaaagtca ggctctttcc cagcgaggca gtgatagctg agggcatcct aaagtccacg  
1800



agggggaaat ctgactcaga ttcagtcaat tcagtgtttt ctgacacacc ttttgtggcg  
 1860  
 tccacttaat ttgtgcctat atttgtatga tgtcataatt taatctgttc atattttaact  
 1920  
 ttgtgtgtgg tctgcaaaat aaacagcagg acagaaattg tgttgttttg ttctttgaaa  
 1980  
 tacaacaaaa ttctcttaaa atgattggta ggaaatgagg taaagtactt cagttcctca  
 2040  
 atgtgccata gaaagatggg gttgttttcc aaagtttaag ttctagatca caatatctta  
 2100  
 gcttttagca ctattggtaa tttcagagta ggcccaaagg tgatatgact cccattgtcc  
 2160  
 ctttatttag gatattgaaa gaaaaataa actttatgta ttagtgtcct ttaaaaatag  
 2220  
 actttgctaa cttactagta ccagagttat tttaaagaaa aacactagtg tccaatttca  
 2280  
 tttttaaaag atgtagaaag aagaatcaag catcaattaa ttataaagcc taaagcaag  
 2340  
 ttagatttgg gggttattca gccaaaatta ccgttttaga ccagaatgaa tagactacac  
 2400  
 tgataaaatg tactggataa tgccacatcc tatatgggtg tatagaaata gtgcaaggaa  
 2460  
 agtacatttg tttgectgtc ttttcatttt gtacattctt cccattctgt attcttgtac  
 2520  
 aaaagatctc attgaaaatt taaagtcac ataatttgtt gccataaata tgtaagtgtc  
 2580  
 aataccaaaa tgtctgagta acttcttaaa tccctgttct agcaaactaa tattggttca  
 2640  
 tgtgcttgtg tatatgtaaa tcttaaaatta tgtgaactat taaatagacc ctactgtact  
 2700  
 gtgctttgga catttgaatt aatgtaaata tatgtaatct gtgacttgat attttgtttt  
 2760  
 atttggtat ttaaaaacat aaatctaaaa tgtcttatgt tatcagatta tgctattttg  
 2820  
 tataaagcac cactgatagc aaaaaaaaa  
 2849

&lt;210&gt; 5750

&lt;211&gt; 522

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5750

Met	Ser	Leu	Arg	Val	His	Thr	Leu	Pro	Thr	Leu	Leu	Gly	Ala	Val	Val
1				5					10					15	
Arg	Pro	Gly	Cys	Arg	Glu	Leu	Leu	Cys	Leu	Leu	Met	Ile	Thr	Val	Thr
			20					25				30			
Val	Gly	Pro	Gly	Ala	Ser	Gly	Val	Cys	Pro	Thr	Ala	Cys	Ile	Cys	Ala
			35				40				45				
Thr	Asp	Ile	Val	Ser	Cys	Thr	Asn	Lys	Asn	Leu	Ser	Lys	Val	Pro	Gly
		50				55				60					
Asn	Leu	Phe	Arg	Leu	Ile	Lys	Arg	Leu	Asp	Leu	Ser	Tyr	Asn	Arg	Ile
		65			70					75				80	
Gly	Leu	Leu	Asp	Ser	Glu	Trp	Ile	Pro	Val	Ser	Phe	Ala	Lys	Leu	Asn

				85					90					95	
Thr	Leu	Ile	Leu	Arg	His	Asn	Asn	Ile	Thr	Ser	Ile	Ser	Thr	Gly	Ser
			100						105					110	
Phe	Ser	Thr	Thr	Pro	Asn	Leu	Lys	Cys	Leu	Asp	Leu	Ser	Ser	Asn	Lys
		115					120						125		
Leu	Lys	Thr	Val	Lys	Asn	Ala	Val	Phe	Gln	Glu	Leu	Lys	Val	Leu	Glu
	130						135					140			
Val	Leu	Leu	Leu	Tyr	Asn	Asn	His	Ile	Ser	Tyr	Leu	Asp	Pro	Ser	Ala
	145				150					155					160
Phe	Gly	Gly	Leu	Ser	Gln	Leu	Gln	Lys	Leu	Tyr	Leu	Ser	Gly	Asn	Phe
				165					170					175	
Leu	Thr	Gln	Phe	Pro	Met	Asp	Leu	Tyr	Val	Gly	Arg	Phe	Lys	Leu	Ala
		180						185					190		
Glu	Leu	Met	Phe	Leu	Asp	Val	Ser	Tyr	Asn	Arg	Ile	Pro	Ser	Met	Pro
	195						200					205			
Met	His	His	Ile	Asn	Leu	Val	Pro	Gly	Lys	Gln	Leu	Arg	Gly	Ile	Tyr
	210					215					220				
Leu	His	Gly	Asn	Pro	Phe	Val	Cys	Asp	Cys	Ser	Leu	Tyr	Ser	Leu	Leu
	225				230				235						240
Val	Phe	Trp	Tyr	Arg	Arg	His	Phe	Ser	Ser	Val	Met	Asp	Phe	Lys	Asn
				245					250					255	
Asp	Tyr	Thr	Cys	Arg	Leu	Trp	Ser	Asp	Ser	Arg	His	Ser	Arg	Gln	Val
		260						265					270		
Leu	Leu	Leu	Gln	Asp	Ser	Phe	Met	Asn	Cys	Ser	Asp	Ser	Ile	Ile	Asn
	275						280					285			
Gly	Ser	Phe	Arg	Ala	Leu	Gly	Phe	Ile	His	Glu	Ala	Gln	Val	Gly	Glu
	290					295					300				
Arg	Leu	Met	Val	His	Cys	Asp	Ser	Lys	Thr	Gly	Asn	Ala	Asn	Thr	Asp
	305				310					315					320
Phe	Ile	Trp	Val	Gly	Pro	Asp	Asn	Arg	Leu	Leu	Glu	Pro	Asp	Lys	Glu
				325					330					335	
Met	Glu	Asn	Phe	Tyr	Val	Phe	His	Asn	Gly	Ser	Leu	Val	Ile	Glu	Ser
		340						345					350		
Pro	Arg	Phe	Glu	Asp	Ala	Gly	Val	Tyr	Ser	Cys	Ile	Ala	Met	Asn	Lys
	355						360					365			
Gln	Arg	Leu	Leu	Asn	Glu	Thr	Val	Asp	Val	Thr	Ile	Asn	Val	Ser	Asn
	370					375					380				
Phe	Thr	Val	Ser	Arg	Ser	His	Ala	His	Glu	Ala	Phe	Asn	Thr	Ala	Phe
	385				390					395					400
Thr	Thr	Leu	Ala	Ala	Cys	Val	Ala	Ser	Ile	Val	Leu	Val	Leu	Leu	Tyr
			405						410					415	
Leu	Tyr	Leu	Thr	Pro	Cys	Pro	Cys	Lys	Cys	Lys	Thr	Lys	Arg	Gln	Lys
		420						425					430		
Asn	Met	Leu	His	Gln	Ser	Asn	Ala	His	Ser	Ser	Ile	Leu	Ser	Pro	Gly
	435						440					445			
Pro	Ala	Ser	Asp	Ala	Ser	Ala	Asp	Glu	Arg	Lys	Ala	Gly	Ala	Gly	Lys
	450					455					460				
Arg	Val	Val	Phe	Leu	Glu	Pro	Leu	Lys	Asp	Thr	Ala	Ala	Gly	Gln	Asn
	465				470					475					480
Gly	Lys	Val	Arg	Leu	Phe	Pro	Ser	Glu	Ala	Val	Ile	Ala	Glu	Gly	Ile
			485					490					495		
Leu	Lys	Ser	Thr	Arg	Gly	Lys	Ser	Asp	Ser	Asp	Ser	Val	Asn	Ser	Val
		500						505					510		
Phe	Ser	Asp	Thr	Pro	Phe	Val	Ala	Ser	Thr						

515

520

<210> 5751  
 <211> 926  
 <212> DNA  
 <213> Homo sapiens

<400> 5751  
 ngcgggcatg gccaggcggg gtggcctcgg gccggggcag aggcctggct ccgctgcctg  
 60  
 acctggaaca gtctctgcct ctctccaagc ctcggtttcc ccagctggac ggtgatggg  
 120  
 gtgagggcta gctgagggct ctctgccct tcgtgcatte gctggtcact aatcgggcac  
 180  
 cttgtgggtg ctgtgctccg catgggggac ccagtgggta cagagacgcc caccctcctg  
 240  
 gggctcccag agcagaggcg cgcagcagtt agacacgtga acaaggggcg aggcacccctg  
 300  
 gagatccgct ctgtacacgt gggcgctcgtg gtcacaaag cagtgtcttc aggettctac  
 360  
 gtggccatga accgcggggg ccgcctctac gggtcgcgac tctacaccgt ggactgcagg  
 420  
 ttccggggagc gcacgaaga gaacggccac aacacctacg cctcacagcg ctggcgccgc  
 480  
 cgcgccagc ccatgttcct ggcgctggac aggagggggg ggccccggcc aggcggccgg  
 540  
 acgcgcggt accacctgtc cgcccacttc ctgcccgtcc tggctcctg aggcctgag  
 600  
 aggcggcgcg ctcccccaagg tgcttgggt ggtggcgagg ggccccgcca cgcttgttct  
 660  
 tccccctgcy ggctctgtaa gcgctgagtg cccaccgtgt gcgggcgctg tggacacagc  
 720  
 ccaggagccc tccagggggg tccagcctg aggggggtgt ggccaccaag caggttcaat  
 780  
 cctgagttgg ggacctgag gacccaacag ggcgcctctc gggctgaagg acgcagacgt  
 840  
 cgaaaggtcg agggggacgt cccaggcagg gcccggcaga ggcaggggct cggggggggg  
 900  
 agcacgttgg gagtgggggc aggagc  
 926

<210> 5752  
 <211> 129  
 <212> PRT  
 <213> Homo sapiens

<400> 5752  
 Met Gly Asp Pro Val Val Thr Glu Thr Pro Thr Leu Leu Gly Leu Pro  
 1 5 10 15  
 Glu Gln Arg Arg Ala Ala Val Arg His Val Asn Lys Gly Ala Gly Ile  
 20 25 30  
 Leu Glu Ile Arg Ser Val His Val Gly Val Val Val Ile Lys Ala Val  
 35 40 45  
 Ser Ser Gly Phe Tyr Val Ala Met Asn Arg Arg Gly Arg Leu Tyr Gly

50	55	60
Ser Arg Leu Tyr Thr Val Asp Cys Arg Phe Arg Glu Arg Ile Glu Glu		
65	70	75
Asn Gly His Asn Thr Tyr Ala Ser Gln Arg Trp Arg Arg Arg Gly Gln		80
	85	90
Pro Met Phe Leu Ala Leu Asp Arg Arg Gly Gly Pro Arg Pro Gly Gly		95
	100	105
Arg Thr Arg Arg Tyr His Leu Ser Ala His Phe Leu Pro Val Leu Val		110
	115	120
		125
Ser		

&lt;210&gt; 5753

&lt;211&gt; 5668

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5753

```

nnaccggtac tttgtcttgg ataacagtgt catcctggca atgctggaac aacctcttgg
60
aaatgagcag aatgattttt tccctctgt cactgtgctg gtccggggaa tgtctggaag
120
acttgcttgg gcacaacagc tttgtctttt acccagagga gcaaaagcaa atcagaagct
180
ttttgtacct gaacctcgcc cagttcctaa aatgacgttg gatttaaata ttctgtgaaa
240
catcggccat ttctgaaga ggtggacaag attccttttg tgaaagcaga tctcagcatt
300
ccagatttgc atgaaatagt cactgaagaa ttagaagaga gacacgaaaa attaaggagt
360
ggcatggccc agcagattgc ttatgaaata caccttgagc aacagagtga ggaggaattg
420
cagaagagaa gttttcctga ccagttacg gattgcaagc ccccgccctc tgcccaggaa
480
ttccaaacag ccgcctttt tctctcacac ttggatttt tgtccttaga agcactgaag
540
gaacctgcaa atagtcgtct acctctcac cttattgcac ttgattccac gatacctgga
600
ttttttgatg acattgggta tctggatctc ttgccatgtc gtcttttga cacagttttt
660
attttctata tgaagccagg tcagaaaacg aaccaagaga ttttaaagaa tgtggagtct
720
tccagaactg ttcagccaca tttcctagaa tttttgctt cccttggtg gtcagtagat
780
gtgggcagac accctgggtg gactgggcat gtttctacca gttggtctat taattgttgt
840
gatgatggtg aaggatctca acaagaagaa gtgatttcct ctgaagatat tggagctagc
900
atthtcaatg gacagaagaa ggtgctgtat tatgctgat cccttacaga aattgctttt
960
gtggttcctt ctctgtgga gtccttaact gattcattgg aaagtaacat ctcgaccaa
1020
gatagtgatt caaatatgga tcttatgcca ggaattctga aacagccatc cctgacactt
1080

```

gagctttttcc ccaatcatac agacaatctt aattcctcac agaggctcag tcccagttcc  
1140  
agaatgagga agctgcctca gggctgcctt gttcctcccc ttggacctga gacaagagtt  
1200  
tctgtagtct gggtggaacg ctatgatgat atagaaaact ttcccccttc agagctgatg  
1260  
acagagatca gtactggtgt ggaaactact gcaaatagta gcacttcact gagatctaca  
1320  
actcttgaaa aagaagttcc tgtcatcttc atccaccctt taaacactgg attattccgg  
1380  
ataaaaaattc aaggagccac tggaaaattt aatatggtca tccctcttgt ggatgggatg  
1440  
attgtcagca ggcgagctct tggctttctg gtgaggcaga ctgtaattaa catttgtaga  
1500  
agaaagagac tggaaagtga ctctacagt ccccccatg tccgccggaa acagaaaatc  
1560  
accgacattg tcaacaagta ccggaacaag cagctggagc cagagtttta tacttcactt  
1620  
ttccaggagg ttggactcaa gaactgcagt tcttagacca ctgaatttct aagactgttg  
1680  
aactccagtt tgggaactat aacacagcag aacagtttga taggtgatca ctgtaaaaat  
1740  
aaaaacaaat cactcccaag agcttactgt ttaatcacca gaatagaaga aacacattat  
1800  
aaccatttg atagaagact ttgggctatc tagtgaaatg ggctccaga cacaatcata  
1860  
ctctgtgta taatgatgat atacatttta gccataaact ttcttttaaa agtgacaatt  
1920  
ttagttaaac ataagccttt tgaggagaaa ggcttttatg catctcagtt aaacacgtgc  
1980  
attggtagta tcaacaaatt tgcaatatag aagttgaaga tagtttttta cctcactttt  
2040  
taggaggttg tattcaaaat taaaatctca gaatcttaca ggacatttaa agactcatgt  
2100  
tgatagcatg gaggagaagg aaagaagtca cagccttcta ctcagttgta ggtcttcttg  
2160  
tcatccagct gtcacactga caaaaagaaa agatgataca tgttttttgc tcagataaga  
2220  
agcctgacat taaaagatgt catatttttt tctccacatt tcaaaaagtt gtccttctca  
2280  
tcactgcaca gatctgtctg aaagcctcag tttctgagtg acccaggaac agatcagaaa  
2340  
tggagcatgg ccttgtcctt taatggggat gcaataaag tttgtgggt taaaagttat  
2400  
aagacagcag tgatacccca ctctctccat tattgtccag cggggtgaca taatgacagg  
2460  
ttaaatattt gtgattcatt gattaaatat tatttaaaga aatgtaaatt cacaataagg  
2520  
gttgaaaatt atttggttcc atccattgtc tcttatttca ggaccaagca gcaaaactgca  
2580  
gtagtttgtg aaggattcta atatggggtt caggaatagc ctctcaacgc tactaattca  
2640  
gatctctccc agagaactac tggatttctt cataattgac aaacatgagt gaccacctct  
2700

ttgggtggct actgttagaa atggetgttg tcatgttttc tggactttgc cagccaacag  
2760  
atccctgcc a ggttttgaa atacttctat tacctcgctg ctacttttct gcagggataa  
2820  
aacttttgag gtggccagac ccagaacatc caaggattcc tgttacagtg ctacagtata  
2880  
cactgtcat ttatcctatt ctcatgtgct ttcttcttta gtaagattat tttaagaaaa  
2940  
taagtgatat ttaaagtcca aagaggaatg atcacagttg tataaggggt gttttccac  
3000  
ttgaactctg atgtcagtcg actgtgggtc agagctacaa ccatctgttt ggtttgatgt  
3060  
tttgggtggt tacttacgga gtggggatag tgtgagacct aattccctgt gcaaatgtct  
3120  
cttattccag aaatgtgcat ttgtcatct ataagcaaga aatatgggca tagcagctct  
3180  
tggtttaaag ttgccataa cctgttcattg ttgttttaa gctcaggtaa agataacctc  
3240  
ctctttctat gactccagtt tccattcagg ttatagtatt attcaatagt tgattttctt  
3300  
tttaagctgg gcaataaatt gatgtttcca gatggtaaca tgggagaggg catataggat  
3360  
aaagatgagc aaattctacc ctaaaaatgt tctagtagtt cacaggaaga agatgaggtt  
3420  
taataacttt caaggaatt ctagattgac attttgaggg gaaaatgggc tcttgttcta  
3480  
gttgaagtga gcagagaagg ctataaatta atatgtaact tacagcattc cagagggtta  
3540  
aaataactga tgcagatgta cttcttcagt gtgattcttc agatcaaact tttacttttg  
3600  
gcatagttaa ttccagaaaa atgtgctgta tgtgtgtgtg tatgaggggt ggtcttgctg  
3660  
atccttcagt tagctctaaa ttctggcaac tccttgtaat tccaatgtat ttgatacatg  
3720  
aacaatcatg ttgaatgcat ttgtgatctg ggagacttcc tctcttcca gggaaggaag  
3780  
gatgtgcagc cctgaaggc atgaaactcc cagtgtgtac ggagccagtg gaatatggga  
3840  
taccatacc ttaccaggcg ctggttcctt ctgctcaca taacatctgc ccaaagaggg  
3900  
agtgggaaga acgcttagct ctttactag tatggatttg agttcatggt cactattttt  
3960  
accacactgc ctttgttaaa aatcactttg agtagaatag cactggagga acatatttag  
4020  
cacctaata taatatttag tagtccattg ataaatttgc cagcatatgt tctagcctct  
4080  
ggggggaaac caggaccact ttgtctgtg gcttaaacag ttcagttgct atatctgttg  
4140  
ggtatgccgg ggggtgatga gtgtggcatt cgtgaagag gaaggtggta agtaaggttt  
4200  
cccttctact gccttcttaa gttgcaggag ggagcttttc tctccctc tggttgggag  
4260  
cactgaggac agtgaggagg gcttttacct tgtaatcct ttccttattt agctagcttt  
4320

cctttttgtc tagggcttcc tcttgagacc ctcttccatc cattgggcct ttgaaaggac  
4380  
taatcagaca cacacacaca cacacacaca cacacacaca cacactcgca tactcatgca  
4440  
cattttcctt catttccaga tcttttattt cagagcagcc cattttcctc tggattcatt  
4500  
gatgaataca agtaccacaca cctttggcca gtaatgtcag ttacctgctg caggttctgt  
4560  
gtatgaggcc ttcatagaag gttaccttct ccatacacta gggaagcatt tgtcagactc  
4620  
tgcagactgg gttctagaga ggcagagtct ttaagagtat tcatttcttc tgggaagggtg  
4680  
agcttttacc aaagtggag ttagccttgc tcaaagatgt gttttgtggt aggtggtaaa  
4740  
aataaataaa taaataaata ataaaaaag aaacatgtat tggaggtaat ttgacactgc  
4800  
tgctggcagt agttctctat tcaccatttt aaagccatt caggttctct ctctctgaaa  
4860  
agaactgatt gctgtgttta catgaaatga cattggagtc agatggctctg ttttaaagat  
4920  
ttccatgaca gcctcttttc ctgagttgga gagattggag gtggtctatc cgtacgatgt  
4980  
ggaatcaaac ggtgggtttc ttagtagcta aagaagccat gtacttctag tgtgtttctc  
5040  
agaatatcaa ctcatgttct tcagatgctt ttcttttttt aatggtgagg gaaaaggat  
5100  
aatttgggat tccacagtgc cttgcatata gtaggcgccc agtaaatact tgttgaagca  
5160  
aaccaagttt cccaagtcct catctcttat agtgaccaag acatctttct cctctgaagg  
5220  
gcttggcagt tgtggctaaa aaataagcag tatcattatt tgcttgaaat catatataca  
5280  
gtttgtatga atttcagtat gttgccaaga catgattttt tcttattgta tttctgtaa  
5340  
atatttctgg cactgaactg taaagtaaag gcaaagtga aatatgaagg cgtgcccggt  
5400  
ccccttgctt cctgtgtttc atcttcgtcg gttagggaag aaggtccaga ggtttgtttg  
5460  
tatttatgcc gatcctttgt ccagaagaag cccatggaat attgaatgta atacatttag  
5520  
tcaattaaat ttttaaggaga ttcttatcta ataactttgt gtgtgctttt ggatacaggc  
5580  
tgaggcttta ctctacact ggtgctgta atttaccct ttcaggggat gctgctcgg  
5640  
ctttggctgc cctttataat ttagatct  
5668

&lt;210&gt; 5754

&lt;211&gt; 221

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5754

Asp Ser Leu Glu Ser Asn Ile Ser Asp Gln Asp Ser Asp Ser Asn Met

1	5	10	15
Asp Leu Met	Pro Gly Ile Leu Lys	Gln Pro Ser Leu Thr	Leu Glu Leu
20	25	30	
Phe Pro Asn	His Thr Asp Asn Leu	Asn Ser Ser Gln Arg	Leu Ser Pro
35	40	45	
Ser Ser Arg	Met Arg Lys Leu Pro	Gln Gly Arg Pro Val	Pro Pro Leu
50	55	60	
Gly Pro Glu	Thr Arg Val Ser Val	Val Trp Val Glu Arg	Tyr Asp Asp
65	70	75	80
Ile Glu Asn	Phe Pro Leu Ser Glu	Leu Met Thr Glu Ile	Ser Thr Gly
85	90	95	
Val Glu Thr	Thr Ala Asn Ser Ser	Thr Ser Leu Arg Ser	Thr Thr Leu
100	105	110	
Glu Lys Glu	Val Pro Val Ile Phe	Ile His Pro Leu Asn	Thr Gly Leu
115	120	125	
Phe Arg Ile	Lys Ile Gln Gly Ala	Thr Gly Lys Phe Asn	Met Val Ile
130	135	140	
Pro Leu Val	Asp Gly Met Ile Val	Ser Arg Arg Ala Leu	Gly Phe Leu
145	150	155	160
Val Arg Gln	Thr Val Ile Asn Ile	Cys Arg Arg Lys Arg	Leu Glu Ser
165	170	175	
Asp Ser Tyr	Ser Pro Pro His Val	Arg Arg Lys Gln Lys	Ile Thr Asp
180	185	190	
Ile Val Asn	Lys Tyr Arg Asn Lys	Gln Leu Glu Pro Glu	Phe Tyr Thr
195	200	205	
Ser Leu Phe	Gln Glu Val Gly Leu	Lys Asn Cys Ser Ser	
210	215	220	

&lt;210&gt; 5755

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5755

nnacgcgtga aggggaacct gtactgcgag gtgtgccccg aggaccggcc cctcatcgtg  
 60  
 cagttctgtg ccaatgaccc ggaggtgttt gttcaggcgg ctctcctggc tcaggattac  
 120  
 tgtgacgcca ttgacctgaa cttgggctgc ccacagatga tagccaagag aggtcactat  
 180  
 ggcgcccttc tgcaggacga gtgggacctg ctccaaagaa tgattttgct ggcccacgag  
 240  
 aaactctctg ttctgtcac gtgcaaaatc cgtgtcttcc cggagattga caagaccgtg  
 300  
 aggtacgccc agatgctgga gaaggccggc tgccagttgc tgacggtgca cggacgcacc  
 360  
 aaggagcaga aggggcccct gtcgggtgca gcgtcctggg agcatatcaa ggctgtgcgg  
 420  
 aaggctgtgg ccatccctgt gtttgtaac gggaacatcc agtgccctgca ggacgtggag  
 480  
 cgctgcctcc gggacacggg tgtgcagggc gtcatgagcg cagagggcaa cctgcacaac  
 540  
 cccgcctgt tcgagggccg gagccctgcc gtgtgggagc tggccgagga gtatctggac  
 600



atcgtgcggg agcacccttg cccctgtcc tacgtccggg cccacctctt caagctgtgg  
 660  
 caccacacgc tgcagggtgca ccaggagctg cgagaggagc tggccaaggt gaagaccctg  
 720  
 gagggcatcg ctgctgtgag ccaggagctg aagctgcggt gtcaggagga gatatccagg  
 780  
 caggagggag cgaagccac cggcgacttg ccctccact ggatctgcca gccctacatc  
 840  
 cggccggggc ccaggagagg gagcaaggag aaggcagggt cgcgcagcaa gcgggccctg  
 900  
 gaggaagagg aggggtggcac ggaggtcctg tccaagaaca agcaaaagaa gcagctgagg  
 960  
 aacccccaca agaccttcga cccctctctg aagccaaaat atgcaaagtg tgaccagtgt  
 1020  
 ggaaacccaa agggcaacag atgtgtgttc agcctgtgcc gcggctgctg caagaagcga  
 1080  
 gcctccaaag agactgcaga ctgccaggt caggattgc tttttaaaac caaattggag  
 1140  
 aagtctctgg cctggaaaga ggcccagcct gagctgcagg agcctcagcc agcagcacct  
 1200  
 ggaacaccag gtggcttctc cgaagtcagt ggcagtgtcc tggcctgaag gccacaaacc  
 1260  
 cccacccccca ggactgtctg tggagcctgg acacgtccta cttaagaaaa tgccttttac  
 1320  
 tcagggaatc tctgtctact taatgtggaa agacacgccc atgtccccct tcggccact  
 1380  
 ctgggggctt ggaaatgctg cagtggggag caggccccag gctggacctg cctgtcctc  
 1440  
 agcacgctg tgcaaaagtg aacaataaat catttcaaag atgaaaaaaa aaaaaaaaaa  
 1500  
 aaaaagtcca cgc  
 1513

&lt;210&gt; 5756

&lt;211&gt; 415

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5756

Xaa	Arg	Val	Lys	Gly	Asn	Leu	Tyr	Cys	Glu	Val	Cys	Pro	Glu	Asp	Arg
1			5						10					15	
Pro	Leu	Ile	Val	Gln	Phe	Cys	Ala	Asn	Asp	Pro	Glu	Val	Phe	Val	Gln
			20					25					30		
Ala	Ala	Leu	Leu	Ala	Gln	Asp	Tyr	Cys	Asp	Ala	Ile	Asp	Leu	Asn	Leu
		35					40					45			
Gly	Cys	Pro	Gln	Met	Ile	Ala	Lys	Arg	Gly	His	Tyr	Gly	Ala	Phe	Leu
	50					55				60					
Gln	Asp	Glu	Trp	Asp	Leu	Leu	Gln	Arg	Met	Ile	Leu	Leu	Ala	His	Glu
65				70					75					80	
Lys	Leu	Ser	Val	Pro	Val	Thr	Cys	Lys	Ile	Arg	Val	Phe	Pro	Glu	Ile
			85					90						95	
Asp	Lys	Thr	Val	Arg	Tyr	Ala	Gln	Met	Leu	Glu	Lys	Ala	Gly	Cys	Gln
			100					105					110		
Leu	Leu	Thr	Val	His	Gly	Arg	Thr	Lys	Glu	Gln	Lys	Gly	Pro	Leu	Ser

115	120	125
Gly Ala Ala Ser Trp Glu His Ile Lys Ala Val Arg Lys Ala Val Ala		
130	135	140
Ile Pro Val Phe Ala Asn Gly Asn Ile Gln Cys Leu Gln Asp Val Glu		
145	150	155
Arg Cys Leu Arg Asp Thr Gly Val Gln Gly Val Met Ser Ala Glu Gly		
165	170	175
Asn Leu His Asn Pro Ala Leu Phe Glu Gly Arg Ser Pro Ala Val Trp		
180	185	190
Glu Leu Ala Glu Glu Tyr Leu Asp Ile Val Arg Glu His Pro Cys Pro		
195	200	205
Leu Ser Tyr Val Arg Ala His Leu Phe Lys Leu Trp His His Thr Leu		
210	215	220
Gln Val His Gln Glu Leu Arg Glu Glu Leu Ala Lys Val Lys Thr Leu		
225	230	235
Glu Gly Ile Ala Ala Val Ser Gln Glu Leu Lys Leu Arg Cys Gln Glu		
245	250	255
Glu Ile Ser Arg Gln Glu Gly Ala Lys Pro Thr Gly Asp Leu Pro Phe		
260	265	270
His Trp Ile Cys Gln Pro Tyr Ile Arg Pro Gly Pro Arg Glu Gly Ser		
275	280	285
Lys Glu Lys Ala Gly Ala Arg Ser Lys Arg Ala Leu Glu Glu Glu Glu		
290	295	300
Gly Gly Thr Glu Val Leu Ser Lys Asn Lys Gln Lys Lys Gln Leu Arg		
305	310	315
Asn Pro His Lys Thr Phe Asp Pro Ser Leu Lys Pro Lys Tyr Ala Lys		
325	330	335
Cys Asp Gln Cys Gly Asn Pro Lys Gly Asn Arg Cys Val Phe Ser Leu		
340	345	350
Cys Arg Gly Cys Cys Lys Lys Arg Ala Ser Lys Glu Thr Ala Asp Cys		
355	360	365
Pro Gly His Gly Leu Leu Phe Lys Thr Lys Leu Glu Lys Ser Leu Ala		
370	375	380
Trp Lys Glu Ala Gln Pro Glu Leu Gln Glu Pro Gln Pro Ala Ala Pro		
385	390	395
Gly Thr Pro Gly Gly Phe Ser Glu Val Met Gly Ser Ala Leu Ala		
405	410	415

&lt;210&gt; 5757

&lt;211&gt; 2362

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5757

cagatcacca gcgtttgtag acagtagtgt ggcgcttgga gtttacctga gggccagtgg  
60

agctccaggg acctatcagg acggggacct gtggggactg ggaaggcctg tggggctgcg  
120

tggagccccg tactggaggg cgacgggggt gacggggacg ctgaggacac agagcggagg  
180

ggcatgatgg ctgctggggc tggaggtgtc gagagtgact gtgctggggc tgctccatcg  
240

ttgtctgagc ctcccggtgc tgccgtgtg gccgtttctt tgatgaggct ctcagaggcc  
300

gagtcattca ctgccagcct gaagctgccc atgcgcatat tcgggctgga gcctctgagg  
360  
ccacacaaac gccggctggg gaggcgaagt gtggggctga gcaccagaac tccaggagcg  
420  
tctgggctgg agacagaact ggggtggcag gtggggaggg cctgcagatc tgagtgggca  
480  
gccgaggagg aaccagaag acgccagcga tggagctctg ccggggcgga atgtggccag  
540  
gagggggcggg agcagtgcg gcctgtccgg cgctagaact agggaccgtg ctctcaggac  
600  
ctctggatgt tcccagtat cctgatgttc caccagaag ccgccagggc catcctggag  
660  
taccgcatcc gcacgtgga cggggccctg gagaacgccc agaacctggg ctaccagga  
720  
gccaaagtttg cctgggagag tgcagactcc ggcctagagg ttgcccctga ggacatttac  
780  
ggagtccagg aggtccacgt caacggggcc gtggtgttg ccttcgagct gtactaccat  
840  
accacccagg acctgcagct atttcgagag ggtggtgggt gggaggtggt tagggctgtg  
900  
gcgaagtttt ggtgcagtcg tgttgagtgg agccccaggg aggaaaagta ccacctgagg  
960  
ggagtcatgt cccccacga gtaccattca ggggtcaaca actctgtgta caccaacgtc  
1020  
ctgggtccaga acagcctgcg ctttgcctgt gccctggccc aggacctggg tcttcccatc  
1080  
cccagccagt ggctggcggg ggctgacaag atcaaggtag cctttgacgt ggagcagaac  
1140  
ttccaccccg agttcgatgg gtatgagcct ggagaggtgg tgaagcaggc agacgtcgtg  
1200  
ctcctgggat acccagtcgc cttctccctg agtctgatg ttgcaggaa aaatctggag  
1260  
atttacgagg ctgtgacgtc cccccaggc ccgccatga cctggagcat gtttgctgtg  
1320  
ggctggatgg agctgaagga cgcagtgcgg gcccggggcc tcttgagacag gagctttgcc  
1380  
aacatggctg aaccttcaa ggtgtggacg gagaatgcag acgggtcagg cgctgtgaac  
1440  
ttcctgacag gcatgggggg cttcctgcag gcgggtgtct tcgggtgcac ggggttcagg  
1500  
gtcacccgag cgggtgtgac ctttgaccct gtgtgtctgt cggggatctc cagagtgagc  
1560  
gtctccggca tcttctacca ggggaacaag ctcaacttct ctttttccga ggactccgtg  
1620  
accgtggagg tcacagctcg agcagggccc tgggctctc acctggaggc tgagctgtgg  
1680  
ccatcccagt ccgggtctc cctgttgcca ggacacaagg tctcctttcc ccgctcggct  
1740  
ggccggatac aaatgtcacc ccgaagctg cctggaagtt ccagctccga gttccctggg  
1800  
aggacttttt cagatgttag ggaccgctc cagagcccc tctgggtcac cctgggttcc  
1860  
tccagcccca ccgagtcact cactgtggac cctgcctctg aataatcagg aacggtggct  
1920

tcagagacgt ctcttgggcc ttccctctgg ccacgtctgc acccaccct cctgggcacc  
 1980  
 ctcttagcct gccatccctc acctgcagcc aggtctctcag ggaaggtcca tgctgcttgg  
 2040  
 cctgagttca aggctttctg cctgtagcct ggactcccgt ggacccccgt gggcaggtgg  
 2100  
 cttccccgtg gcattctccac accgctctg cctgccccgt tggactgatg ctatcgcgca  
 2160  
 cgggtcccacg accccacccc gagctcctga agccggggtc tgagcctgca tcacctctgg  
 2220  
 cctctcatcc cccactctcc tgagagcagt ggtcacagcg gccggccgct ctgctgagaa  
 2280  
 ggcagagagg caggctcagg cctcagcgtg gacagcaggg ataaggggca cgaaggacgg  
 2340  
 ggactcggcc ccttcagaat tc  
 2362

&lt;210&gt; 5758

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5758

Gly	Pro	Cys	Ser	Gln	Asp	Leu	Trp	Met	Phe	Pro	Ser	Ile	Leu	Met	Phe
1				5					10					15	
His	Pro	Glu	Ala	Ala	Arg	Ala	Ile	Leu	Glu	Tyr	Arg	Ile	Arg	Thr	Leu
			20					25					30		
Asp	Gly	Ala	Leu	Glu	Asn	Ala	Gln	Asn	Leu	Gly	Tyr	Gln	Gly	Ala	Lys
		35					40					45			
Phe	Ala	Trp	Glu	Ser	Ala	Asp	Ser	Gly	Leu	Glu	Val	Cys	Pro	Glu	Asp
	50					55					60				
Ile	Tyr	Gly	Val	Gln	Glu	Val	His	Val	Asn	Gly	Ala	Val	Val	Leu	Ala
65					70				75					80	
Phe	Glu	Leu	Tyr	Tyr	His	Thr	Thr	Gln	Asp	Leu	Gln	Leu	Phe	Arg	Glu
				85					90					95	
Gly	Gly	Gly	Trp	Glu	Val	Val	Arg	Ala	Val	Ala	Lys	Phe	Trp	Cys	Ser
			100					105					110		
Arg	Val	Glu	Trp	Ser	Pro	Arg	Glu	Glu	Lys	Tyr	His	Leu	Arg	Gly	Val
		115					120					125			
Met	Ser	Pro	Asp	Glu	Tyr	His	Ser	Gly	Val	Asn	Asn	Ser	Val	Tyr	Thr
	130					135					140				
Asn	Val	Leu	Val	Gln	Asn	Ser	Leu	Arg	Phe	Ala	Ala	Ala	Leu	Ala	Gln
145					150					155				160	
Asp	Leu	Gly	Leu	Pro	Ile	Pro	Ser	Gln	Trp	Leu	Ala	Val	Ala	Asp	Lys
			165					170						175	
Ile	Lys	Val	Pro	Phe	Asp	Val	Glu	Gln	Asn	Phe	His	Pro	Glu	Phe	Asp
		180					185						190		
Gly	Tyr	Glu	Pro	Gly	Glu	Val	Val	Lys	Gln	Ala	Asp	Val	Val	Leu	Leu
		195					200					205			
Gly	Tyr	Pro	Val	Pro	Phe	Ser	Leu	Ser	Pro	Asp	Val	Arg	Arg	Lys	Asn
	210					215					220				
Leu	Glu	Ile	Tyr	Glu	Ala	Val	Thr	Ser	Pro	Gln	Gly	Pro	Ala	Met	Thr
225					230					235				240	
Trp	Ser	Met	Phe	Ala	Val	Gly	Trp	Met	Glu	Leu	Lys	Asp	Ala	Val	Arg

	245		250		255
Ala Arg Gly Leu Leu Asp Arg Ser Phe Ala Asn Met Ala Glu Pro Phe					
	260		265		270
Lys Val Trp Thr Glu Asn Ala Asp Gly Ser Gly Ala Val Asn Phe Leu					
	275		280		285
Thr Gly Met Gly Gly Phe Leu Gln Ala Val Val Phe Gly Cys Thr Gly					
	290		295		300
Phe Arg Val Thr Arg Ala Gly Val Thr Phe Asp Pro Val Cys Leu Ser					
305		310		315	320
Gly Ile Ser Arg Val Ser Val Ser Gly Ile Phe Tyr Gln Gly Asn Lys					
	325		330		335
Leu Asn Phe Ser Phe Ser Glu Asp Ser Val Thr Val Glu Val Thr Ala					
	340		345		350
Arg Ala Gly Pro Trp Ala Pro His Leu Glu Ala Glu Leu Trp Pro Ser					
	355		360		365
Gln Ser Arg Leu Ser Leu Leu Pro Gly His Lys Val Ser Phe Pro Arg					
	370		375		380
Ser Ala Gly Arg Ile Gln Met Ser Pro Pro Lys Leu Pro Gly Ser Ser					
385		390		395	400
Ser Ser Glu Phe Pro Gly Arg Thr Phe Ser Asp Val Arg Asp Pro Leu					
	405		410		415
Gln Ser Pro Leu Trp Val Thr Leu Gly Ser Ser Ser Pro Thr Glu Ser					
	420		425		430
Leu Thr Val Asp Pro Ala Ser Glu					
	435		440		

&lt;210&gt; 5759

&lt;211&gt; 1333

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5759

cgcaaggcg cgcgagtggt tgacgcgctt cttagctggt gcgcgccgga gcccaaattc  
 60  
 caagtggaaa ctgcaggcgc acgagggagg aacgcgtgga gcatgaaaag gcaggggggc  
 120  
 tcctctgagc gaaaacgagc gcggataccg tccgggaagg ccggagcagc aaatggattt  
 180  
 ctcattggaag tttgtgttga ttcagtggaa tcagctgtga atgcagaaaag aggaggtgct  
 240  
 gatcgattg aattatgttc tggtttatca gaggggggaa ctacaccag catgggtgtc  
 300  
 cttcaagtag tgaagcagag tggtcagatc ccagtttttg tgatgattcg gccacgggga  
 360  
 ggtgattttt tgtattcaga tcgtgaaatt gaggtgatga aggctgacat tcgtcttgcc  
 420  
 aagctttatg gtgctgatgg tttgggtttt ggggcattga ctgaagatgg acacattgac  
 480  
 aaagagctgt gtatgtccct tatggctatt tgccgccctc tgccagtcac tttccaccga  
 540  
 gcctttgaca tggttcatga tccaatggca gctctggaga cctcttaac cttgggattt  
 600  
 gaacgcgtgt tgaccagtgg atgtgacagt tcagcattag aagggtacc cctaataaag  
 660

cgactcattg agcaggcaaa aggcaggatt gtggtaatgc caggagggtg tataacagac  
 720  
 agaaatctac aaaggatcct tgagggttca ggtgctacag aattccactg ttctgctcgg  
 780  
 tctactagag actcgggaat gaagtttcga aattcatctg ttgccatggg agcctcactt  
 840  
 tcttgctcag aatattccct aaaggtaaca gatgtgacca aagtaaggac ttggaatgct  
 900  
 atcgcaaaga acatcctggt gtagccagac ctctctgaga gacatggata tcacaggatg  
 960  
 aaggtagaac tataatctgc aattctctat gacacagctt taaccttctt ctctggccag  
 1020  
 gacagtcgca atctttgttt taagtttcac atggccatgg agaattgtgc caagaagaaa  
 1080  
 aagaatttga aacagagata cagtcacttc ctttgcttag tcttaccagt gattgtcatc  
 1140  
 atgggttaaag ctgggtctgtg cttcttccat agacagaagc ttagtctgtt ttcagtggaa  
 1200  
 ttaattgatg aactgggaaa attttaactg catggtatga attcagagtg tgacttaagg  
 1260  
 gtcaattcaa agcagtattt tgacttttca tttgtaaaat aaaaatttcc actattaaaa  
 1320  
 aaaaaaaaaa aaa  
 1333

<210> 5760

<211> 273

<212> PRT

<213> Homo sapiens

<400> 5760

Met	Lys	Arg	Gln	Gly	Ala	Ser	Ser	Glu	Arg	Lys	Arg	Ala	Arg	Ile	Pro
1				5				10						15	
Ser	Gly	Lys	Ala	Gly	Ala	Ala	Asn	Gly	Phe	Leu	Met	Glu	Val	Cys	Val
			20				25						30		
Asp	Ser	Val	Glu	Ser	Ala	Val	Asn	Ala	Glu	Arg	Gly	Gly	Ala	Asp	Arg
		35				40						45			
Ile	Glu	Leu	Cys	Ser	Gly	Leu	Ser	Glu	Gly	Gly	Thr	Thr	Pro	Ser	Met
	50				55					60					
Gly	Val	Leu	Gln	Val	Val	Lys	Gln	Ser	Val	Gln	Ile	Pro	Val	Phe	Val
65				70					75					80	
Met	Ile	Arg	Pro	Arg	Gly	Gly	Asp	Phe	Leu	Tyr	Ser	Asp	Arg	Glu	Ile
			85				90						95		
Glu	Val	Met	Lys	Ala	Asp	Ile	Arg	Leu	Ala	Lys	Leu	Tyr	Gly	Ala	Asp
		100					105						110		
Gly	Leu	Val	Phe	Gly	Ala	Leu	Thr	Glu	Asp	Gly	His	Ile	Asp	Lys	Glu
	115					120					125				
Leu	Cys	Met	Ser	Leu	Met	Ala	Ile	Cys	Arg	Pro	Leu	Pro	Val	Thr	Phe
	130				135					140					
His	Arg	Ala	Phe	Asp	Met	Val	His	Asp	Pro	Met	Ala	Ala	Leu	Glu	Thr
145				150					155					160	
Leu	Leu	Thr	Leu	Gly	Phe	Glu	Arg	Val	Leu	Thr	Ser	Gly	Cys	Asp	Ser
		165					170					175			
Ser	Ala	Leu	Glu	Gly	Leu	Pro	Leu	Ile	Lys	Arg	Leu	Ile	Glu	Gln	Ala

	180		185		190
Lys Gly Arg Ile Val Val Met Pro Gly Gly Gly Ile Thr Asp Arg Asn					
195		200		205	
Leu Gln Arg Ile Leu Glu Gly Ser Gly Ala Thr Glu Phe His Cys Ser					
210		215		220	
Ala Arg Ser Thr Arg Asp Ser Gly Met Lys Phe Arg Asn Ser Ser Val					
225		230		235	240
Ala Met Gly Ala Ser Leu Ser Cys Ser Glu Tyr Ser Leu Lys Val Thr					
	245		250		255
Asp Val Thr Lys Val Arg Thr Leu Asn Ala Ile Ala Lys Asn Ile Leu					
	260		265		270
Val					

&lt;210&gt; 5761

&lt;211&gt; 1452

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5761

```

nnaccatctt aaggacagaa aagctacagg actctaggag gccaccgtcc tgatttggga
60
agtccaactt actttggcca gacagcagct aagctgggtc atcccatcag cctggattgg
120
tgaaactgaa tcacaggaga tatttccagg tttgctggga tgggaaacct gctcaaagtc
180
cttaccaggg aaattgaaaa ctatccacac ttttccctgg attttgaaaa tgctcagcct
240
acagaaggag agagagaaat ctggaaccag atcagcgccg tccttcagga ttctgagagc
300
atccttgtag acctgcaggc ttacaaaggc gcaggcccag agatccgaga tgcaattcaa
360
aatcccaatg acattcagct tcaagaaaaa gcttggaatg cggtgtgccc tcttggtgtg
420
aggctaaaga gattttacga gttttccatt agactagaaa aagctcttca gagtttattg
480
gaatctctga cttgtccacc ctacacacca acccaacacc tggaaaggga acaggccctg
540
gcaaaggagt ttgccgaaat tttacatttt acccttcgat tcgatgagct gaagatgagg
600
aaccgggcta ttcagaatga cttcagctac tacagaagaa caatcagtcg caaccgcac
660
aacaacatgc acctagacat tgagaatgaa gtcaataatg agatggccaa tcgaatgtcc
720
ctcttctatg cagaagccac gccaatgctg aaaaccctta gcaatgccac aatgcacttt
780
gtctctgaaa aaaaaactct gccaatagag aacaccacag actgcctcag cacaatgaca
840
agtgtctgta aagtcagctt ggaaactccg gactacagaa gtaggtttac gagtgaagag
900
accctgatgt tctgcatgag ggtgatggtg ggagtcacaa tcctctatga ccatgtccac
960
cctgtgggag ctttctgcaa gacatccaag atcgatatga aaggctgcat aaaagttttg
1020

```

aaggagcagg cccagacag tgtggagggg ctgctaaatg ccctcagggt cactacaaag  
 1080  
 cacttgaacg atgaatcaac ttccaaacag attcgagcaa tgcttcagta gagctctgct  
 1140  
 caaagaagag gatctatgtg ctgacctcag aagatgtata tgtttacata atttaataca  
 1200  
 gattgatgtt aatacttgtg tatttacata accgtttcct tcttgctact gaaatatatg  
 1260  
 gaccttaatt tgtatcctga ctgactcaac ccagcagagc ataaattgac ttgagagcct  
 1320  
 tacctttgat gtctgaaatg aaacccctt ctccaaaggc aaaattcgga gactttgatc  
 1380  
 tttgctactg gagtccttta acaacaccta taacgataaa aaattcctaa ttgtttgtgg  
 1440  
 tagtaaaaaa aa  
 1452

&lt;210&gt; 5762

&lt;211&gt; 333

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5762

Ile	Thr	Gly	Asp	Ile	Ser	Arg	Phe	Ala	Gly	Met	Gly	Asn	Leu	Leu	Lys
1				5					10					15	
Val	Leu	Thr	Arg	Glu	Ile	Glu	Asn	Tyr	Pro	His	Phe	Phe	Leu	Asp	Phe
			20					25					30		
Glu	Asn	Ala	Gln	Pro	Thr	Glu	Gly	Glu	Arg	Glu	Ile	Trp	Asn	Gln	Ile
		35					40					45			
Ser	Ala	Val	Leu	Gln	Asp	Ser	Glu	Ser	Ile	Leu	Ala	Asp	Leu	Gln	Ala
		50				55					60				
Tyr	Lys	Gly	Ala	Gly	Pro	Glu	Ile	Arg	Asp	Ala	Ile	Gln	Asn	Pro	Asn
65					70				75				80		
Asp	Ile	Gln	Leu	Gln	Glu	Lys	Ala	Trp	Asn	Ala	Val	Cys	Pro	Leu	Val
			85					90					95		
Val	Arg	Leu	Lys	Arg	Phe	Tyr	Glu	Phe	Ser	Ile	Arg	Leu	Glu	Lys	Ala
			100					105					110		
Leu	Gln	Ser	Leu	Leu	Glu	Ser	Leu	Thr	Cys	Pro	Pro	Tyr	Thr	Pro	Thr
		115						120				125			
Gln	His	Leu	Glu	Arg	Glu	Gln	Ala	Leu	Ala	Lys	Glu	Phe	Ala	Glu	Ile
		130				135					140				
Leu	His	Phe	Thr	Leu	Arg	Phe	Asp	Glu	Leu	Lys	Met	Arg	Asn	Pro	Ala
145					150					155				160	
Ile	Gln	Asn	Asp	Phe	Ser	Tyr	Tyr	Arg	Arg	Thr	Ile	Ser	Arg	Asn	Arg
			165					170					175		
Ile	Asn	Asn	Met	His	Leu	Asp	Ile	Glu	Asn	Glu	Val	Asn	Asn	Glu	Met
		180						185				190			
Ala	Asn	Arg	Met	Ser	Leu	Phe	Tyr	Ala	Glu	Ala	Thr	Pro	Met	Leu	Lys
		195					200					205			
Thr	Leu	Ser	Asn	Ala	Thr	Met	His	Phe	Val	Ser	Glu	Asn	Lys	Thr	Leu
	210					215					220				
Pro	Ile	Glu	Asn	Thr	Thr	Asp	Cys	Leu	Ser	Thr	Met	Thr	Ser	Val	Cys
225				230						235				240	
Lys	Val	Met	Leu	Glu	Thr	Pro	Glu	Tyr	Arg	Ser	Arg	Phe	Thr	Ser	Glu



245 250 255  
 Glu Thr Leu Met Phe Cys Met Arg Val Met Val Gly Val Ile Ile Leu  
 260 265 270  
 Tyr Asp His Val His Pro Val Gly Ala Phe Cys Lys Thr Ser Lys Ile  
 275 280 285  
 Asp Met Lys Gly Cys Ile Lys Val Leu Lys Glu Gln Ala Pro Asp Ser  
 290 295 300  
 Val Glu Gly Leu Leu Asn Ala Leu Arg Phe Thr Thr Lys His Leu Asn  
 305 310 315 320  
 Asp Glu Ser Thr Ser Lys Gln Ile Arg Ala Met Leu Gln  
 325 330

&lt;210&gt; 5763

&lt;211&gt; 3840

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5763

nctcctcccc tccccaagat ggcgtccttg ctgcagtcgg accgggttct ctatctagtc  
 60  
 cagggagaaa agaaggttcg ggccccgctc tcgcaactct acttctgccg ctattgttagc  
 120  
 gaactgcggt cgctggaatg tgtgtctcac gaggtggact cccattattg tcccagttgt  
 180  
 ttagaaaata tgccatcggc tgaagccaaa ctaaaaaaga atagatgtgc caattgtttt  
 240  
 gactgtcctg gctgcatgca caccctctct actcggggcca cgagcatctc cacacagctt  
 300  
 ccagatgacc cagccaagac caccatgaag aaagcctatt acctggcatg tggattttgt  
 360  
 cgctggacgt ctagagatgt gggcatggca gacaaatctg tagctagtgg cggttggcag  
 420  
 gaacctgaaa atcctcacac acaacggatg aacaaattga ttgaatatta ccagcagctt  
 480  
 gctcagaaaag agaaggttga gcgagatcgc aagaaactgg cacgacgtag aaactatatg  
 540  
 cctctggctt ttctggacaa atatggtctt ggaaccaggc ttcagcgacc acgagctggt  
 600  
 gcatccatca gtacccttgc cggactttcc cttaaagaag gagaggatca gaaagaggta  
 660  
 aagattgagc cagctcaggc tgtggatgaa gtggaacctc tacctgaaga ctattataca  
 720  
 agaccagtaa atttaacaga ggtaacaacc cttcagcagc gtctgttaca gcttgacttc  
 780  
 cagccagtct gtgcttcaca gctctatcct cgccacaaac atcttctgat caaacggtcc  
 840  
 ctgcgctgcc gtaaattgtg acataatttg agcaagccag aatttaaccc aacgtcaatc  
 900  
 aaattcaaaa tccagctggt cgctgtcaat tatattccag aagtgagaat catgtcaatt  
 960  
 cccaaccttc gctacatgaa ggagagccag gtctcctga ctcttacaaa tccagttgag  
 1020  
 aacctcacc atgtgactct cttcagatgt gaggaggggg accctgatga tatcaacagc  
 1080

actgctaagg tgggtggcgcc tcccaaagag ctcgtttttag ctggcaagga tgcagcagca  
1140  
gagtacgatg agttggcaga acctcaagac ttccaggacg atcctgacat tatagccttc  
1200  
agaaaggcca acaaagtggg tattttcatc aaagttacac cacagcgtga ggagggtgaa  
1260  
gtgaccgtgt gcttcaagat gaagcatgat tttaaaaacc tggcagcccc cattcgcccc  
1320  
attgaagaaa gtgaccaggg aacagaagtc atctggctca cccagcatgt ggaacttagc  
1380  
ttgggcccac ttcttcctta aaaggttcca ctggagggca gatcccaaag gacagtatca  
1440  
ccgtaaacct gcgttaaaat gtggaagctg ctgcttcatt aggccttggt tataacgatg  
1500  
taccatgca ctacggaatt ctattgctaa gaaagtggga gcataggcaa ggcattggga  
1560  
acacagggtg gctgctgttg ctcttgctct caccctgtt gacaccagta agtctgtgtc  
1620  
tcctcactg aacctgcac gttgagtaac agcagcataa ttccatccta ggaaagggga  
1680  
tgggtgttcc ttggaatggc attgtattta ccacctgaga aactctgtac tgtctcttga  
1740  
ctgatctca ctaaggatca caatgtcaca gatgaaactt aaatgataac ccaaaggtag  
1800  
acctgctgtt aatgatccag cattgggtcac aatgtaccaa ctgctttctg cattccgtta  
1860  
aatatcatct aacagtctaa aacatatccc ttcatgcca taatggctgc cattttgcca  
1920  
tagatttcca tataactgaa aaactgaatt gtcactttat ctttagtata atgatgattg  
1980  
gaaaaacctg tgaagtgtt aaggcactct catttgccct ctttttctaa gtgaatacag  
2040  
gacacgtatt agttgttctt aatttttttc ccagtaaaat atggatcttt taagaagaat  
2100  
ttgagaagca aacaattaca tgcatgtca agggggtagc agattccatt cgttttcaat  
2160  
attgccacaa taccagggg ttaatgctgc cacagggggg caatctttat ttgtcttact  
2220  
tcctacccct tcctgttct gcctctttta ctcagttaag ttgttctgtt tgggacctgg  
2280  
aaaagaacct aaagaaaacc tgagtggaca ggttcatttc tggaatgcag aaaacatttt  
2340  
aaaggctaga tttttagaat attctcaact agcattcttt ccattgattt gaaggggaaa  
2400  
ttaactatta taatctcttg aatccaaaac tggatattaa gaactttccc ccttactaag  
2460  
tttaagactt ttgtcatgtg gtgagtcaaa taagaccatt ttgattgtaa accataaaat  
2520  
agttcagcaa gtagccaca gttctggcct aacagcagac ttgctgtttt cacttggtat  
2580  
cctggagttg gggtgctaac ctttaattct atgatgtttt ctaaaatgaa acttgataaa  
2640  
gtagaccacc agctgcaccg tgtttctgtt aaaagtattg ttagtaagtg gccaagagac  
2700

ttgaggaaaa tacagatttt ttgtttacct tggctctgtt ttaagtctta aaaaattaaa  
 2760  
 gataacatta taatgtagaa tacagatggg acatagtcct tgtaagcttc ccttgaaaat  
 2820  
 gtttttaata ttttaggaagc ttttaaaaga cactaaattg tactctaaaa gacactaaat  
 2880  
 tgtactaatt gtacaaaggt caagccaatt ttatgaaaca gtcctacaga gtaatatatg  
 2940  
 tgatgcagtg taagaaggaa aatactcatc tctaacatta tggtaataac atttagcctc  
 3000  
 ttaggagttg gaggaggggg atgggtaatt acagatttgc agactataga aagagtttca  
 3060  
 tttttttgtg accccacaga gtctcaaatt tttatttcac tacctgctag agcctactgt  
 3120  
 gaaatcactg ctccatattt gccagtggag gaaatgggca tagagtagag aatagcttca  
 3180  
 tatgtttaca cgtttgcata gactacacac atgtcatgcg tttatggcag gtagctggta  
 3240  
 tttatcccc aaagtaataa tggtgaagta tgggtctcat cattcccata cacagaaaca  
 3300  
 caaaacactt tgatcataaa cttttttctt cagaagccaa actaacttgc agaataatag  
 3360  
 agccactggg ttaatgtttc ctcaagatag gttttagtgt aagctagtat tctgtgtgtt  
 3420  
 cgtagaaatg attcaatacc tgcagctggg gaattaggaa ttgtatttgt tgcctttttt  
 3480  
 atattagatg aggtgcaaaa attttaatgc tagtcagtat gcaccaccac aggaaagtta  
 3540  
 gatcccatga gcaactgaaa ctacagcttt ggaaacttag gctaagttaa tttggatttg  
 3600  
 ttacttgatt cacctactga ccttttcttt tgtttgaagt gcttatcagc ataatgagct  
 3660  
 aagtgtcatg catatttgtg aagaaacacc ctttttggtc ccttttgga cagagaggta  
 3720  
 ctccttgatc tttatgaatg acaggttact gttttgcctt attgcttaac ttaatgtagt  
 3780  
 gaaataaagc agacaaagct tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 3840

&lt;210&gt; 5764

&lt;211&gt; 466

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5764

Xaa Pro Pro Leu Pro Lys Met Ala Ser Leu Leu Gln Ser Asp Arg Val  
 1 5 10 15  
 Leu Tyr Leu Val Gln Gly Glu Lys Lys Val Arg Ala Pro Leu Ser Gln  
 20 25 30  
 Leu Tyr Phe Cys Arg Tyr Cys Ser Glu Leu Arg Ser Leu Glu Cys Val  
 35 40 45  
 Ser His Glu Val Asp Ser His Tyr Cys Pro Ser Cys Leu Glu Asn Met  
 50 55 60  
 Pro Ser Ala Glu Ala Lys Leu Lys Lys Asn Arg Cys Ala Asn Cys Phe

70										75					80				
65	Asp	Cys	Pro	Gly	Cys	Met	His	Thr	Leu	Ser	Thr	Arg	Ala	Thr	Ser	Ile			
					85					90					95				
	Ser	Thr	Gln	Leu	Pro	Asp	Asp	Pro	Ala	Lys	Thr	Thr	Met	Lys	Lys	Ala			
				100					105					110					
	Tyr	Tyr	Leu	Ala	Cys	Gly	Phe	Cys	Arg	Trp	Thr	Ser	Arg	Asp	Val	Gly			
			115					120					125						
	Met	Ala	Asp	Lys	Ser	Val	Ala	Ser	Gly	Gly	Trp	Gln	Glu	Pro	Glu	Asn			
		130					135					140							
	Pro	His	Thr	Gln	Arg	Met	Asn	Lys	Leu	Ile	Glu	Tyr	Tyr	Gln	Gln	Leu			
	145					150					155					160			
	Ala	Gln	Lys	Glu	Lys	Val	Glu	Arg	Asp	Arg	Lys	Lys	Leu	Ala	Arg	Arg			
				165					170						175				
	Arg	Asn	Tyr	Met	Pro	Leu	Ala	Phe	Ser	Asp	Lys	Tyr	Gly	Leu	Gly	Thr			
			180						185					190					
	Arg	Leu	Gln	Arg	Pro	Arg	Ala	Gly	Ala	Ser	Ile	Ser	Thr	Leu	Ala	Gly			
			195					200					205						
	Leu	Ser	Leu	Lys	Glu	Gly	Glu	Asp	Gln	Lys	Glu	Val	Lys	Ile	Glu	Pro			
		210					215					220							
	Ala	Gln	Ala	Val	Asp	Glu	Val	Glu	Pro	Leu	Pro	Glu	Asp	Tyr	Tyr	Thr			
	225					230					235					240			
	Arg	Pro	Val	Asn	Leu	Thr	Glu	Val	Thr	Thr	Leu	Gln	Gln	Arg	Leu	Leu			
				245					250						255				
	Gln	Pro	Asp	Phe	Gln	Pro	Val	Cys	Ala	Ser	Gln	Leu	Tyr	Pro	Arg	His			
			260						265					270					
	Lys	His	Leu	Leu	Ile	Lys	Arg	Ser	Leu	Arg	Cys	Arg	Lys	Cys	Glu	His			
			275					280					285						
	Asn	Leu	Ser	Lys	Pro	Glu	Phe	Asn	Pro	Thr	Ser	Ile	Lys	Phe	Lys	Ile			
		290						295					300						
	Gln	Leu	Val	Ala	Val	Asn	Tyr	Ile	Pro	Glu	Val	Arg	Ile	Met	Ser	Ile			
	305					310					315					320			
	Pro	Asn	Leu	Arg	Tyr	Met	Lys	Glu	Ser	Gln	Val	Leu	Leu	Thr	Leu	Thr			
				325						330					335				
	Asn	Pro	Val	Glu	Asn	Leu	Thr	His	Val	Thr	Leu	Phe	Glu	Cys	Glu	Glu			
			340						345					350					
	Gly	Asp	Pro	Asp	Asp	Ile	Asn	Ser	Thr	Ala									

<210> 5765

<211> 3220

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5765

cacgaggccc cagcctcag gcaactggtt gttaccgagg aagatggcgg cgccagaccc  
60  
gaggcgctag ggaagatcgc accgcggacg cccgctgagc ttggcgacg ggccgaccag  
120  
gagctggtga ctgccctcat gtgtgatttg cggcggccag cggcaggtgg gatgatggac  
180  
ttggcctacg tctgtgagtg ggagaaatgg tccaagagca cccactgccc atcggtgccc  
240  
ctggcctcgc cctggtcctg ccgaaatctc atcgcttca ccatggacct gcgcagcgat  
300  
gaccaggacc tgaccgcgat gatccacatc ctggacacgg agcacccttg ggacctgcac  
360  
tcgatccct cagagcacca cgaggccatc acctgcctgg agtgggacca gtcaggctcc  
420  
cggctcctgt cagcagatgc cgacgggcag atcaagtgtt ggagcatggc ggaccacctg  
480  
gctaatagct gggagagctc agtgggcagc ctagtggagg gggaccccat tgtggccctg  
540  
tcctggctgc acaatggtgt gaaactggcc ctgcacgtgg agaagtggg cgctccagc  
600  
ttcggggaga agttctccc agtcaagttc tcaccgtgc tcacgtgtt cggcggcaag  
660  
cccatggagg gctggatcgc ggtgacggtc agcggcctgg tcaccgtgtc cctgctgaag  
720  
cccagcgggc aggtgctgac gtccaccgag agcctgtgcc ggctgcgcgg ccgctgggcc  
780  
ctggccgaca tcgccttcac cggcggcggc aacatcgtgg tggccacggc ggacggcagc  
840  
agcgcgtcgc ccgtgcagtt ctacaaggtg tgcgtgagcg tggtagcga gaagtgccgt  
900  
atcgacacgg agatcctgcc ctccctgttc atgcgtgca ccaccgacct caaccgcaag  
960  
gacaagtctc ccgccatcac ccacctcaag ttcttggccc gggacatgtc ggagcaggtg  
1020  
cttttgtgcy cgtccagcca gaccagcagc atcgtggagt gctggtcctt gcgcaaggag  
1080  
ggactccccg tgaacaacat cttccagcag atctcccccg tggttggcga caaacagccc  
1140  
acaattctca aatggcggat cctatcggcc accaacgacg tggaccgtgt gtcggccgtg  
1200  
gcgtgcccc agctgcccc ttctgtcacc aacaccgacc tcaaggtggc cagcgacaca  
1260  
cagttctacc ctggcctcgg gctggccctg gccttccagc acggcagcgt ccacatcgtg  
1320  
caccggctct cactgcagac catggcggtc ttctacagct ccgcggcccc gaggcctgtg  
1380  
gatgagccgg ccatgaagcg cccccgacc gcgggccccg ccgtccactt aaaggctatg  
1440  
cagctatcgt ggacgtcact ggccctggtg gggattgaca gccacgggaa gctgagcgtg  
1500

ctccgcctct caccttccat gggccacccg ctggaggtgg ggctggcgct gcggcacctg  
1560  
ctcttcctgc tggagtactg catggtgacc ggctacgact ggtgggacat cctgctgcac  
1620  
gtgcagccca gtatggtaca gagcctggtg gagaagctgc acgaggagta cacgcgccag  
1680  
accgctgccc tgcagcaggt cctctccacc cggatcctgg ccatgaaggc ctcgctctgc  
1740  
aagctgtcgc cctgcacggg gaccgcgtg tgcgactacc acaccaagct cttctcacc  
1800  
gccatcagct ccacctgaa gtcgctgctg cgcacctact ttctcaaac gcctgacaag  
1860  
agccccggcg accggctgac cgagatctgc accaagatca ccgacgtcga cattgacaag  
1920  
gtcatgatca acctcaagac ggaggaattt gtgctggaca tgacacactg caggcgctgc  
1980  
agcagctctt gcagtgggtg ggcgacttcg tgctgtacct gctggccagc ctaccaaac  
2040  
agcctgccc cacctcggag cctgccccca cctcggagcc ctcctccacc tcggagccct  
2100  
ccccacctc ggagccctcc tctccatgaa gcctctgctg gttccctgct gaggcggggc  
2160  
cacagcttcc tgcgggacgg cacctcgtg ggcattgctt gggaattgat ggtggctacc  
2220  
cgcactggg gccttctgaa gccagctgc ctgccgtgt atacggccac ctcggatacc  
2280  
caggacagca tgtccctgct cttccgctg ctcaccaagc tetggatctg ctgtcgcgat  
2340  
gaggggccag cgagcgagcc ggatgaggcg ctggtggatg aatgctgcct gctgcccagc  
2400  
cagctgctta tccccagcct ggactggctg ccagccagcg acggcctggt tagccgcctg  
2460  
cagcccaagc agccccctc tctgcagttt ggccgggcgc ccacgtgcc tggcagtgt  
2520  
gccacctgc agctcgacgg cctcgccagg gcccaggcc agcccaagat cgaccacctg  
2580  
cggaggctgc accttggcgc ttgccccacg gaggaatgca aggcctgcac caggtgcggc  
2640  
tgtgtcacca tgtcaagtc gcccacaga accacggcgg tgaagcagtg ggagcagcgc  
2700  
tggatcaaga actgctgtg cgggtgggctc tgggtggcggg tgccctcag ctaccctga  
2760  
gccagctgc cctcagcta ctcctcagct accctcagc tgccctgag ccggtgct  
2820  
gcaagagcca ccgtcgccc tggactctc tcggcgcggt taacctcagc ccgcctgca  
2880  
gggtgttga aggcgtggg ccggacgcct gcgtgaccag cagagcttct gaggaagccc  
2940  
ctgccttgt ccagctgggc ccgcagtcca cacaccactc tcccaggacc ccagatccct  
3000  
ggaccatctg catecagagg accgtccgtg acggccgggg gtccaggcgg acctgtggt  
3060  
gaccggctc gggcgtctcc tcggtttcct tgctcacc gcggagagcg ctgaacctgg  
3120

acaagcagcg gctgggaagg acaggtccaa taaacgcct ctgcgcccc aaaaaaaaaa  
 3180  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 3220

<210> 5766

<211> 873

<212> PRT

<213> Homo sapiens

<400> 5766

Met	Cys	Asp	Leu	Arg	Arg	Pro	Ala	Ala	Gly	Gly	Met	Met	Asp	Leu	Ala
1				5					10					15	
Tyr	Val	Cys	Glu	Trp	Glu	Lys	Trp	Ser	Lys	Ser	Thr	His	Cys	Pro	Ser
			20					25					30		
Val	Pro	Leu	Ala	Cys	Ala	Trp	Ser	Cys	Arg	Asn	Leu	Ile	Ala	Phe	Thr
		35					40					45			
Met	Asp	Leu	Arg	Ser	Asp	Asp	Gln	Asp	Leu	Thr	Arg	Met	Ile	His	Ile
	50					55					60				
Leu	Asp	Thr	Glu	His	Pro	Trp	Asp	Leu	His	Ser	Ile	Pro	Ser	Glu	His
65					70					75				80	
His	Glu	Ala	Ile	Thr	Cys	Leu	Glu	Trp	Asp	Gln	Ser	Gly	Ser	Arg	Leu
			85						90					95	
Leu	Ser	Ala	Asp	Ala	Asp	Gly	Gln	Ile	Lys	Cys	Trp	Ser	Met	Ala	Asp
		100						105					110		
His	Leu	Ala	Asn	Ser	Trp	Glu	Ser	Ser	Val	Gly	Ser	Leu	Val	Glu	Gly
		115					120					125			
Asp	Pro	Ile	Val	Ala	Leu	Ser	Trp	Leu	His	Asn	Gly	Val	Lys	Leu	Ala
	130						135					140			
Leu	His	Val	Glu	Lys	Ser	Gly	Ala	Ser	Ser	Phe	Gly	Glu	Lys	Phe	Ser
145					150					155				160	
Arg	Val	Lys	Phe	Ser	Pro	Ser	Leu	Thr	Leu	Phe	Gly	Gly	Lys	Pro	Met
			165						170					175	
Glu	Gly	Trp	Ile	Ala	Val	Thr	Val	Ser	Gly	Leu	Val	Thr	Val	Ser	Leu
		180						185					190		
Leu	Lys	Pro	Ser	Gly	Gln	Val	Leu	Thr	Ser	Thr	Glu	Ser	Leu	Cys	Arg
	195						200					205			
Leu	Arg	Gly	Arg	Val	Ala	Leu	Ala	Asp	Ile	Ala	Phe	Thr	Gly	Gly	Gly
	210					215					220				
Asn	Ile	Val	Val	Ala	Thr	Ala	Asp	Gly	Ser	Ser	Ala	Ser	Pro	Val	Gln
225					230					235				240	
Phe	Tyr	Lys	Val	Cys	Val	Ser	Val	Val	Ser	Glu	Lys	Cys	Arg	Ile	Asp
			245							250				255	
Thr	Glu	Ile	Leu	Pro	Ser	Leu	Phe	Met	Arg	Cys	Thr	Thr	Asp	Leu	Asn
		260						265					270		
Arg	Lys	Asp	Lys	Phe	Pro	Ala	Ile	Thr	His	Leu	Lys	Phe	Leu	Ala	Arg
	275						280					285			
Asp	Met	Ser	Glu	Gln	Val	Leu	Leu	Cys	Ala	Ser	Ser	Gln	Thr	Ser	Ser
	290					295						300			
Ile	Val	Glu	Cys	Trp	Ser	Leu	Arg	Lys	Glu	Gly	Leu	Pro	Val	Asn	Asn
305					310					315				320	
Ile	Phe	Gln	Gln	Ile	Ser	Pro	Val	Val	Gly	Asp	Lys	Gln	Pro	Thr	Ile
			325						330					335	
Leu	Lys	Trp	Arg	Ile	Leu	Ser	Ala	Thr	Asn	Asp	Leu	Asp	Arg	Val	Ser

340 345 350  
 Ala Val Ala Leu Pro Lys Leu Pro Ile Ser Leu Thr Asn Thr Asp Leu  
 355 360 365  
 Lys Val Ala Ser Asp Thr Gln Phe Tyr Pro Gly Leu Gly Leu Ala Leu  
 370 375 380  
 Ala Phe His Asp Gly Ser Val His Ile Val His Arg Leu Ser Leu Gln  
 385 390 395 400  
 Thr Met Ala Val Phe Tyr Ser Ser Ala Ala Pro Arg Pro Val Asp Glu  
 405 410 415  
 Pro Ala Met Lys Arg Pro Arg Thr Ala Gly Pro Ala Val His Leu Lys  
 420 425 430  
 Ala Met Gln Leu Ser Trp Thr Ser Leu Ala Leu Val Gly Ile Asp Ser  
 435 440 445  
 His Gly Lys Leu Ser Val Leu Arg Leu Ser Pro Ser Met Gly His Pro  
 450 455 460  
 Leu Glu Val Gly Leu Ala Leu Arg His Leu Leu Phe Leu Leu Glu Tyr  
 465 470 475 480  
 Cys Met Val Thr Gly Tyr Asp Trp Trp Asp Ile Leu Leu His Val Gln  
 485 490 495  
 Pro Ser Met Val Gln Ser Leu Val Glu Lys Leu His Glu Glu Tyr Thr  
 500 505 510  
 Arg Gln Thr Ala Ala Leu Gln Gln Val Leu Ser Thr Arg Ile Leu Ala  
 515 520 525  
 Met Lys Ala Ser Leu Cys Lys Leu Ser Pro Cys Thr Val Thr Arg Val  
 530 535 540  
 Cys Asp Tyr His Thr Lys Leu Phe Leu Ile Ala Ile Ser Ser Thr Leu  
 545 550 555 560  
 Lys Ser Leu Leu Arg Pro His Phe Leu Asn Thr Pro Asp Lys Ser Pro  
 565 570 575  
 Gly Asp Arg Leu Thr Glu Ile Cys Thr Lys Ile Thr Asp Val Asp Ile  
 580 585 590  
 Asp Lys Val Met Ile Asn Leu Lys Thr Glu Glu Phe Val Leu Asp Met  
 595 600 605  
 Thr His Cys Arg Arg Cys Ser Ser Cys Ser Gly Trp Ala Thr Ser  
 610 615 620  
 Cys Cys Thr Cys Trp Pro Ala Tyr Pro Thr Ser Pro Ala Pro Pro Arg  
 625 630 635 640  
 Ser Pro Ala Pro Pro Arg Ser Pro Pro Pro Pro Arg Ser Pro Pro Pro  
 645 650 655  
 Pro Arg Ser Pro Pro Leu His Glu Ala Ser Ala Gly Ser Leu Leu Arg  
 660 665 670  
 Pro Gly His Ser Phe Leu Arg Asp Gly Thr Ser Leu Gly Met Leu Arg  
 675 680 685  
 Glu Leu Met Val Val Ile Arg Ile Trp Gly Leu Leu Lys Pro Ser Cys  
 690 695 700  
 Leu Pro Val Tyr Thr Ala Thr Ser Asp Thr Gln Asp Ser Met Ser Leu  
 705 710 715 720  
 Leu Phe Arg Leu Leu Thr Lys Leu Trp Ile Cys Cys Arg Asp Glu Gly  
 725 730 735  
 Pro Ala Ser Glu Pro Asp Glu Ala Leu Val Asp Glu Cys Cys Leu Leu  
 740 745 750  
 Pro Ser Gln Leu Leu Ile Pro Ser Leu Asp Trp Leu Pro Ala Ser Asp  
 755 760 765  
 Gly Leu Val Ser Arg Leu Gln Pro Lys Gln Pro Leu Arg Leu Gln Phe



770	775	780
Gly Arg Ala Pro Thr Leu	Pro Gly Ser Ala	Ala Thr Leu Gln Leu Asp
785	790	795
Gly Leu Ala Arg Ala Pro Gly Gln	Pro Lys Ile Asp His Leu Arg Arg	800
	805	810
Leu His Leu Gly Ala Cys Pro Thr Glu Glu Cys Lys Ala Cys Thr Arg		815
	820	825
Cys Gly Cys Val Thr Met Leu Lys Ser Pro Asn Arg Thr Thr Ala Val		830
	835	840
Lys Gln Trp Glu Gln Arg Trp Ile Lys Asn Cys Leu Cys Gly Gly Leu		845
	850	855
Trp Trp Arg Val Pro Leu Ser Tyr Pro		860
865	870	

&lt;210&gt; 5767

&lt;211&gt; 1910

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5767

ggtagaaaaa tacacctatt aacaacatta gtaaacacca gaaaccatct aaaaggaatc  
 60  
 ttacatggg caagacgata tctctctgt gagaccaca agtttggtt gagttactcc  
 120  
 tcagtatcgt gggttttgct gctattctga agggatcccc catcacgctg gcagctgtgt  
 180  
 gccaggagag accctgaggg ctgcctcacc acagcaggaa cgccttctc agtcccagcc  
 240  
 caatcctctc tcacactgcg gtgctctgtc cctatggaaa cagcctctgt atgtgtgtgt  
 300  
 gtgtgtgtgt gtgtgtgtgt gtgtgaataa tatatggaat aaagtttgag attccctgct  
 360  
 ttttcatggt acctagcct caattttaaa cttacattgt ttgttaaaat tatcaaattg  
 420  
 acaacctcat tgctatggaa caaaaaagac tgtgaggaaa aagaatcata acttggaaaa  
 480  
 aaataagtga aaaggcattg agagattgct aagatttggt aagttaaaac aataatatat  
 540  
 ctgaaaaaga ctgtgaaaat atatatctca aaagagaaca aggcattgct agaaggctca  
 600  
 gtaaaacaat tactttaaaa gctgactaat aaaaagggtg agtgaaagaa ctcttccatc  
 660  
 cttgaccctt cctcacttcc tccctccgac tctaccagtc tggatgcact aaagcagaat  
 720  
 aacctaaaag ccattgaaaa gtgctggtat ttttcaggat ctcttcaaga caccttccgt  
 780  
 cttggtaacc tgaattctct ctctgatcaa ggcagctgat ggactttcaa tgtatttgga  
 840  
 gatgccggtt caaaaacgct atcatcatct tctgctcctt cttctatcgg tttcatcttg  
 900  
 gcagaggctc gctggtgtgg ggatgacaca tgaagagagg acatgctgga ggtactccga  
 960  
 agaaactggt gcaagccgct gtcactgtca ctggagctgg ctatactggt cctcatttcc  
 1020

aacatggaga tctgtgtgca gaggttgagc tgatgttcca gctttttggc tttcttatca  
 1080  
 tttaaggtgg gatcattcaa tgagtagagc ttatttgtga tgtcttttcc aataagatac  
 1140  
 ctaaagattt catacaagaa aggttctgat tccagaaagt atgttaatct ttctcttgac  
 1200  
 cagcataaaa atctgcagtt atcatctgca ataatgggtga cctggaattt ttcaccttg  
 1260  
 tgcattctgag ttgatctaaa ttcaggagaa tctataaagg cacaggggta aatgttatgc  
 1320  
 agaaaaatgct ctgatagga gaccttcatt tttcccttca agagaatact cagacgggtca  
 1380  
 tcaactgagg ttttatcctc tgcagcataa gtttggccct ttttcaaggc ttggatcatg  
 1440  
 caaaaactgct cagttagtct tctgaacaaa tctggaggca cacggagtggt ttcaaacaat  
 1500  
 cgccggtaca tgccactgag ttccttttca atctttaccg gtctcttctt gtataaaaga  
 1560  
 tacgacagat gcaaaatggt gacaccaag aacacagagt tccagatcat tatatccaag  
 1620  
 gcacatcggt agagagtggc ccagacgata taaagggtac atcctagagt taacattccc  
 1680  
 ctaagaaata tcatatgaag gtgaagagta gttggaataa ccaaccaac tgcaaaacaa  
 1740  
 atatttgcta catgaaaaac cagatgatgt atctctctcc agttttcaca agtgggtctta  
 1800  
 ttggaaggca caggtatgat actttctaac tcaggtgtaa aacctatggc agttgattct  
 1860  
 ctcaatgggc tggactctgt ataattcatt ttgaaaatcc cggttggtcc  
 1910

&lt;210&gt; 5768

&lt;211&gt; 360

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5768

Met	Asn	Tyr	Thr	Glu	Ser	Ser	Pro	Leu	Arg	Glu	Ser	Thr	Ala	Ile	Gly
1				5					10					15	
Phe	Thr	Pro	Glu	Leu	Glu	Ser	Ile	Ile	Pro	Val	Pro	Ser	Asn	Lys	Thr
		20						25					30		
Thr	Cys	Glu	Asn	Trp	Arg	Glu	Ile	His	His	Leu	Val	Phe	His	Val	Ala
		35					40					45			
Asn	Ile	Cys	Phe	Ala	Val	Gly	Leu	Val	Ile	Pro	Thr	Thr	Leu	His	Leu
	50					55				60					
His	Met	Ile	Phe	Leu	Arg	Gly	Met	Leu	Thr	Leu	Gly	Cys	Thr	Leu	Tyr
65					70					75				80	
Ile	Val	Trp	Ala	Thr	Leu	Tyr	Arg	Cys	Ala	Leu	Asp	Ile	Met	Ile	Trp
		85						90					95		
Asn	Ser	Val	Phe	Leu	Gly	Val	Asn	Ile	Leu	His	Leu	Ser	Tyr	Leu	Leu
		100					105						110		
Tyr	Lys	Lys	Arg	Pro	Val	Lys	Ile	Glu	Lys	Glu	Leu	Ser	Gly	Met	Tyr
		115					120					125			
Arg	Arg	Leu	Phe	Glu	Pro	Leu	Arg	Val	Pro	Pro	Asp	Leu	Phe	Arg	Arg

130		135		140
Leu Thr Gly Gln Phe Cys Met Ile Gln Thr Leu Lys Lys Gly Gln Thr				
145		150		155
Tyr Ala Ala Glu Asp Lys Thr Ser Val Asp Asp Arg Leu Ser Ile Leu				
	165		170	175
Leu Lys Gly Lys Met Lys Val Ser Tyr Arg Gly His Phe Leu His Asn				
	180		185	190
Ile Tyr Pro Cys Ala Phe Ile Asp Ser Pro Glu Phe Arg Ser Thr Gln				
	195		200	205
Met His Lys Gly Glu Lys Phe Gln Val Thr Ile Ile Ala Asp Asp Asn				
	210		215	220
Cys Arg Phe Leu Cys Trp Ser Arg Glu Arg Leu Thr Tyr Phe Leu Glu				
225		230		235
Ser Glu Pro Phe Leu Tyr Glu Ile Phe Arg Tyr Leu Ile Gly Lys Asp				
	245		250	255
Ile Thr Asn Lys Leu Tyr Ser Leu Asn Asp Pro Thr Leu Asn Asp Lys				
	260		265	270
Lys Ala Lys Lys Leu Glu His Gln Leu Ser Leu Cys Thr Gln Ile Ser				
	275		280	285
Met Leu Glu Met Arg Asn Ser Ile Ala Ser Ser Ser Asp Ser Asp Asp				
	290		295	300
Gly Leu His Gln Phe Leu Arg Ser Thr Ser Ser Met Ser Ser Leu His				
305		310		315
Val Ser Ser Pro His Gln Arg Ala Ser Ala Lys Met Lys Pro Ile Glu				
	325		330	335
Glu Gly Ala Glu Asp Asp Asp Val Phe Glu Pro Ala Ser Pro Asn				
	340		345	350
Thr Leu Lys Val His Gln Leu Pro				
	355		360	

&lt;210&gt; 5769

&lt;211&gt; 427

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5769

gctagcagtg gggttgctag tgacaccata gcatttggag agcatcacct ccctctgtg

60

agtatggcat ccactgtacc tcaactccctt cgtcaggcga gagataacac aatcatggat

120

ctgcagacac agctgaagga agtattaaga gaaaatgac tcttgcggaa ggatgtggaa

180

gtaaaggaga gcaaattgag ttcttcaatg aatagcatca agatcttctg gggcccagag

240

ctgaagaagg aacgagccct gagaaaggat gaagcttcca aaatcccat ttggaaggaa

300

cagtacagag ttgtacaaga ggaaaaccag gtaagttcta cgtgtgttta cctttattgg

360

ctgaattcat gtatataaat gaaatagcct tttttttccc ctttcctaga tttttccctt

420

cacgcgt

427

&lt;210&gt; 5770

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5770

```

Leu Gln Thr Gln Leu Lys Glu Val Leu Arg Glu Asn Asp Leu Leu Arg
 1             5             10             15
Lys Asp Val Glu Val Lys Glu Ser Lys Leu Ser Ser Ser Met Asn Ser
             20             25             30
Ile Lys Ile Phe Trp Gly Pro Glu Leu Lys Lys Glu Arg Ala Leu Arg
             35             40             45
Lys Asp Glu Ala Ser Lys Ile Pro Ile Trp Lys Glu Gln Tyr Arg Val
             50             55             60
Val Gln Glu Glu Asn Gln Val Ser Ser Thr Cys Val Tyr Leu Tyr Trp
65             70             75             80
Leu Asn Ser Cys Ile
                        85

```

&lt;210&gt; 5771

&lt;211&gt; 2539

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5771

```

gtacacattc caaaaagaga ttgatacact tgcaatgaag ggttcttgct tgaggagacc
60
aggagtctggg tttgtcttgc caatggaagt tggagtggag ccactcccga ctgtgtgcct
120
gtcagatgtg ccaccccgcc acaactggcc aatgggggtga cggaaggcct ggactatggc
180
ttcatgaagg aagtaacatt ccactgtcat gggctacatc ttgcacggtg ctccaaaact
240
cacctgtcag tcagaggcaa ctgggatgca gagattcttc tctgtaaacc agtcaactgt
300
ggacctcttg aagatcttgc ccattggttc cctaattggtt tttcctttat tcatgggggc
360
catatacagt atcagtgtct tcttggttat aagctccatg gaaattcatc aagaagggtc
420
ctctccaatg gctcctggag tggcagctca ccttcttgcc tgccttgag atgttcaca
480
ccagtaattg aatatggaac tgtcaatggg acagattttg actgtggaaa ggcagcccg
540
attcagtgtc tcaaaggctt caagctccta ggactttctg aaatcacctg tgaagccgat
600
ggccagtgga gctctgggtt cccccactgt gaacacactt cttgtgggtc tcttccaatg
660
ataccaaatg cgttcatcag tgagaccagc tcttggaagg aaaatgtgat aacttacagc
720
tgcaggtctg gatatgtcat acaaggcagt tcagatctga tttgtacaga gaaaggggta
780
tggaaccagc cttatccagt ctgtgagccc ttgtcctgtg ggtccccacc gtctgtcgcc
840
aatgcagtgg caactggaga ggcacacacc tatgaaagtg aagtgaaact cagatgtctg
900

```

gaaggttata cgatggatac agatacagat acaatcacct gtcagaaaga tggtcgctgg  
960  
ttccctgaga gaatctcctg cagtccataa aaatgtcctc tcccggaaaa cataacacat  
1020  
atacttgtac atggggacga tttcagtgtg aataggcaag tttctgtgtc atgtgcagaa  
1080  
gggtatacct ttgagggagt taacatatca gtatgtcagc ttgatggaac ctgggagcca  
1140  
ccattctccg atgaatcttg cagtccagtt tcttgtggga aacctgaaag tccagaacat  
1200  
ggatttgtgg ttggcagtaa atacaccttt gaaagcacia ttatttatca gtgtgagcct  
1260  
ggctatgaac tagaggggaa cagggaaagt gtctgccagg agaacagaca gtggagtggg  
1320  
gggtgggcaa tatgcaaaga gaccaggtgt gaaactccac ttgaatttct caatgggaaa  
1380  
gctgacattg aaaacaggac gactggaccc aacgtggtat attcctgcaa cagaggtac  
1440  
agtcttgaag ggccatctga ggcacactgc acagaaaatg gaacctggag ccaccagtc  
1500  
cctctctgca aaccaaattc atgccctgtt ccttttgtga tccccagaa tgctctgtg  
1560  
tctgaaaagg agttttatgt tgatcagaat gtgtccatca aatgtaggga aggttttctg  
1620  
ctgcagggcc acggcatcat tacctgcaac cccgacgaga cgtggacaca gacaagcgc  
1680  
aaatgtgaaa aaatctcatg tgggccacca gctcacgtag aaaatgcaat tgctcgaggc  
1740  
gtacattatc aatatggaga catgatcacc tactcatgtt acagtggata catgttggag  
1800  
ggtttcctga ggagtgtttg tttagaaaat ggaacatgga catcacctcc tatttcaga  
1860  
gctgtctgtc gatttccatg tcagaatggg gggcatctgc caacgccccaa atgcttgttc  
1920  
ctgtccagag ggctggatgg ggcgcctctg tgaagaacca atctgcattc ttccctgtct  
1980  
gaacggaggt cgctgtgtgg ccccttacca gtgtgactgc ccgcctggct ggacggggtc  
2040  
tcgctgtcat acagctgttt gccagctctc ctgcttaaatt ggtggaaaat gtgtaagacc  
2100  
aaaccgatgt cactgtcttt cttcttggac gggacataac tgttccagga aaaggaggac  
2160  
tgggttttaa cactgcacg accatctggc tctcccaaaa gcaggatcat ctctcctcg  
2220  
tagtgcttg gcactctgga acttatgcaa agaaagtcca acatggtgct gggctctgtt  
2280  
tagtaaactt gttacttggg gttacttttt ttattttgtg atatattttg ttattccttg  
2340  
tgacatactt tcttacatgt ttccattttt aaatatgcct gtattttcta tataaaaatt  
2400  
atattaaata gatgtgtctc taccctcaca aaatgtacat attctgctgt ctattgggaa  
2460  
agttcctggg acacattttt attcagttac ttaaaatgat ttttccatta aagtatattt  
2520

tgctactaaa taaaaaaaaa  
2539

<210> 5772

<211> 642

<212> PRT

<213> Homo sapiens

<400> 5772

Tyr Thr Cys Asn Glu Gly Phe Leu Leu Glu Gly Ala Arg Ser Arg Val  
1 5 10 15  
Cys Leu Ala Asn Gly Ser Trp Ser Gly Ala Thr Pro Asp Cys Val Pro  
20 25 30  
Val Arg Cys Ala Thr Pro Pro Gln Leu Ala Asn Gly Val Thr Glu Gly  
35 40 45  
Leu Asp Tyr Gly Phe Met Lys Glu Val Thr Phe His Cys His Gly Leu  
50 55 60  
His Leu Ala Arg Cys Ser Lys Thr His Leu Ser Val Arg Gly Asn Trp  
65 70 75 80  
Asp Ala Glu Ile Pro Leu Cys Lys Pro Val Asn Cys Gly Pro Pro Glu  
85 90 95  
Asp Leu Ala His Gly Phe Pro Asn Gly Phe Ser Phe Ile His Gly Gly  
100 105 110  
His Ile Gln Tyr Gln Cys Phe Pro Gly Tyr Lys Leu His Gly Asn Ser  
115 120 125  
Ser Arg Arg Cys Leu Ser Asn Gly Ser Trp Ser Gly Ser Ser Pro Ser  
130 135 140  
Cys Leu Pro Cys Arg Cys Ser Thr Pro Val Ile Glu Tyr Gly Thr Val  
145 150 155 160  
Asn Gly Thr Asp Phe Asp Cys Gly Lys Ala Ala Arg Ile Gln Cys Phe  
165 170 175  
Lys Gly Phe Lys Leu Leu Gly Leu Ser Glu Ile Thr Cys Glu Ala Asp  
180 185 190  
Gly Gln Trp Ser Ser Gly Phe Pro His Cys Glu His Thr Ser Cys Gly  
195 200 205  
Ser Leu Pro Met Ile Pro Asn Ala Phe Ile Ser Glu Thr Ser Ser Trp  
210 215 220  
Lys Glu Asn Val Ile Thr Tyr Ser Cys Arg Ser Gly Tyr Val Ile Gln  
225 230 235 240  
Gly Ser Ser Asp Leu Ile Cys Thr Glu Lys Gly Val Trp Asn Gln Pro  
245 250 255  
Tyr Pro Val Cys Glu Pro Leu Ser Cys Gly Ser Pro Pro Ser Val Ala  
260 265 270  
Asn Ala Val Ala Thr Gly Glu Ala His Thr Tyr Glu Ser Glu Val Lys  
275 280 285  
Leu Arg Cys Leu Glu Gly Tyr Thr Met Asp Thr Asp Thr Asp Thr Ile  
290 295 300  
Thr Cys Gln Lys Asp Gly Arg Trp Phe Pro Glu Arg Ile Ser Cys Ser  
305 310 315 320  
Pro Lys Lys Cys Pro Leu Pro Glu Asn Ile Thr His Ile Leu Val His  
325 330 335  
Gly Asp Asp Phe Ser Val Asn Arg Gln Val Ser Val Ser Cys Ala Glu  
340 345 350  
Gly Tyr Thr Phe Glu Gly Val Asn Ile Ser Val Cys Gln Leu Asp Gly

355	360	365
Thr Trp Glu Pro Pro Phe Ser Asp Glu Ser Cys Ser Pro Val Ser Cys		
370	375	380
Gly Lys Pro Glu Ser Pro Glu His Gly Phe Val Val Gly Ser Lys Tyr		
385	390	395
Thr Phe Glu Ser Thr Ile Ile Tyr Gln Cys Glu Pro Gly Tyr Glu Leu		
405	410	415
Glu Gly Asn Arg Glu Arg Val Cys Gln Glu Asn Arg Gln Trp Ser Gly		
420	425	430
Gly Val Ala Ile Cys Lys Glu Thr Arg Cys Glu Thr Pro Leu Glu Phe		
435	440	445
Leu Asn Gly Lys Ala Asp Ile Glu Asn Arg Thr Thr Gly Pro Asn Val		
450	455	460
Val Tyr Ser Cys Asn Arg Gly Tyr Ser Leu Glu Gly Pro Ser Glu Ala		
465	470	475
His Cys Thr Glu Asn Gly Thr Trp Ser His Pro Val Pro Leu Cys Lys		
485	490	495
Pro Asn Pro Cys Pro Val Pro Phe Val Ile Pro Glu Asn Ala Leu Leu		
500	505	510
Ser Glu Lys Glu Phe Tyr Val Asp Gln Asn Val Ser Ile Lys Cys Arg		
515	520	525
Glu Gly Phe Leu Leu Gln Gly His Gly Ile Ile Thr Cys Asn Pro Asp		
530	535	540
Glu Thr Trp Thr Gln Thr Ser Ala Lys Cys Glu Lys Ile Ser Cys Gly		
545	550	555
Pro Pro Ala His Val Glu Asn Ala Ile Ala Arg Gly Val His Tyr Gln		
565	570	575
Tyr Gly Asp Met Ile Thr Tyr Ser Cys Tyr Ser Gly Tyr Met Leu Glu		
580	585	590
Gly Phe Leu Arg Ser Val Cys Leu Glu Asn Gly Thr Trp Thr Ser Pro		
595	600	605
Pro Ile Cys Arg Ala Val Cys Arg Phe Pro Cys Gln Asn Gly Gly His		
610	615	620
Leu Pro Thr Pro Lys Cys Leu Phe Leu Ser Arg Gly Leu Asp Gly Ala		
625	630	635
Pro Leu		640

&lt;210&gt; 5773

&lt;211&gt; 579

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5773

nnacgcgtga ggggcctgag gcgagcgggt agagcgtctc ccggaaggat gggccggtct  
60

cggagccgga gctcgtcccg ctccaagcac accaagagca gcaagcacia caagaagcgc  
120

agccggtccc ggtecgcatc ccgggacaag gagcgcgtgc ggaagcgttc caaatctcgg  
180

gaaagtaaac ggaaccggcg gcgggagtcg cgggtccggt cgcgctccac caacacggcc  
240

gtgtcccggc gcgagcggga ccgggagcgc cctcgtcccc gcccgaccgc atcgacatct  
300

tcggg'gcac ggtgagcaag cgcagcagcc tggacgagaa gcagaagcga gaggaggagg  
 360  
 agaagaaagc ggagttcgag cggcagcgaa aaattcgaca gcaagaaata gaagaaaaac  
 420  
 tcatcgagga agaaacagca cgaagagtag aagaattggt agcaanaaag ggtggaggaa  
 480  
 gaactggaga aaaggaagga tgaaattgaa cgagaagtcc tccgaagggt ggaggaagcc  
 540  
 aaacgcacga tggaaaagca gttgctcgaa gaactcgag  
 579

<210> 5774

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5774

Xaa	Arg	Val	Arg	Gly	Leu	Arg	Arg	Ala	Val	Arg	Ala	Ser	Pro	Gly	Arg
1				5				10					15		
Met	Gly	Arg	Ser	Arg	Ser	Arg	Ser	Ser	Arg	Ser	Lys	His	Thr	Lys	
			20				25				30				
Ser	Ser	Lys	His	Asn	Lys	Lys	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg
		35				40				45					
Asp	Lys	Glu	Arg	Val	Arg	Lys	Arg	Ser	Lys	Ser	Arg	Glu	Ser	Lys	Arg
	50					55				60					
Asn	Arg	Arg	Arg	Glu	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Thr	Asn	Thr	Ala
65				70				75					80		
Val	Ser	Arg	Arg	Glu	Arg	Asp	Arg	Glu	Arg	Pro	Arg	Pro	Arg	Pro	Thr
				85				90					95		
Ala	Ser	Thr	Ser	Ser	Gly	Ala	Arg								
				100											

<210> 5775

<211> 1441

<212> DNA

<213> Homo sapiens

<400> 5775

cgctcctcctc ccgctcggaa ggtcccaagg tgagacacct tcagcagggtc tcagggaaga  
 60  
 tggcagccct aggggacatt caggagtccc cttctgtccc gtccctgtc agtctctcat  
 120  
 caccggggac acctggaacc cagcaccacg agcctcagct tcacctccat ggcatcaac  
 180  
 atgcctaagg tgcctcccca gccgtccgac ctggatctcc aagacgtaga ggaagtggag  
 240  
 atcggcagag acaccttctg gcccgactcc gagcccaagc cggagcaggc tccacgctct  
 300  
 cctggctctc aggccctga cgagggggcg ggcggggcgc tgcgcacctc cgtgaggagc  
 360  
 cttccccgca gggcccgggtg cagcgccggc ttcgggctg aatccagcgc ggagcggccg  
 420  
 gcgggccagc cgctggggc cgctccttgc gccagccgc ggggcgctg gcgcgtgacg  
 480



ctctgtgcagc aagcagcggc cgggcccag ggtgcgccc agcgggctgc cgagctggga  
 540  
 gtcaacttcg gtcggagccg gcagggcagc gcgcggggga ccaagccgca caggtgcgag  
 600  
 gcttgccgga agagtttcaa gtataactcg ctgctcctga agcaccagcg catccacacg  
 660  
 ggcgagaagc cctacgctg ccacgagtgc ggcaagtgtt tcgcccagc ttgcgcttc  
 720  
 atccagcacc agcgcacca cagcggcgag aagccctacg cctgccccga gtgcagcaag  
 780  
 accttcacgc gcagctccaa cctcatcaag caccaggtca tccacagcgg cgagcggccc  
 840  
 ttgcctgcg gcgactgcgg caaactgttc cgccgcagct tcgcgctcct ggagcacgcg  
 900  
 cgcgtgcaca gcggcgagaa gccctacgag tgctccgact gcggcaagtg cttccgcggc  
 960  
 cgctgcact tcttcggca caaccgcaca cacacgggag agaagcccta cactgcctc  
 1020  
 gactgcggca agagcttcag ccacagctcg cacctcatca agcaccagcg caccacccgt  
 1080  
 ggcgtagcgc cctacgctg cccgttgtgt ggcaagagct tcagccggcg ctccaacctg  
 1140  
 caccggcacg agaagatcca caccaccggg cccaaggccc tggccatgct gatgctgggg  
 1200  
 gcggcggcgg cgggggctct ggccacaccc ccaccgctc ccacctagga ggccaggaaa  
 1260  
 gggggagcgg ggcccccagg gccactggaa cagccccact ggagtcaagg ctccgagggg  
 1320  
 ggagagaggg gctcgggaag ggagctgggg cggtaggggc atggggtag gcatggcgat  
 1380  
 gggggagggc gagggcgaga aagggcaggc actctgcgaa ttaaaggcct tggacttgaa  
 1440  
 a  
 1441

&lt;210&gt; 5776

&lt;211&gt; 359

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5776

Met	Gly	Ile	Asn	Met	Pro	Lys	Val	Leu	Ser	Gln	Pro	Ser	Asp	Leu	Asp
1				5					10					15	
Leu	Gln	Asp	Val	Glu	Glu	Val	Glu	Ile	Gly	Arg	Asp	Thr	Phe	Trp	Pro
			20					25					30		
Asp	Ser	Glu	Pro	Lys	Pro	Glu	Gln	Ala	Pro	Arg	Ser	Pro	Gly	Ser	Gln
		35					40					45			
Ala	Pro	Asp	Glu	Gly	Ala	Gly	Gly	Ala	Leu	Arg	Thr	Ser	Val	Arg	Ser
	50					55				60					
Leu	Pro	Arg	Arg	Ala	Arg	Cys	Ser	Ala	Gly	Phe	Gly	Pro	Glu	Ser	Ser
65				70					75				80		
Ala	Glu	Arg	Pro	Ala	Gly	Gln	Pro	Pro	Gly	Ala	Val	Pro	Cys	Ala	Gln
			85					90					95		
Pro	Arg	Gly	Ala	Trp	Arg	Val	Thr	Leu	Val	Gln	Gln	Ala	Ala	Ala	Gly

Pro	Glu	Gly	Ala	Pro	Glu	Arg	Ala	Ala	Glu	Leu	Gly	Val	Asn	Phe	Gly
		115					120					125			
Arg	Ser	Arg	Gln	Gly	Ser	Ala	Arg	Gly	Thr	Lys	Pro	His	Arg	Cys	Glu
		130				135					140				
Ala	Cys	Gly	Lys	Ser	Phe	Lys	Tyr	Asn	Ser	Leu	Leu	Lys	His	Gln	
145					150					155				160	
Arg	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Ala	Cys	His	Glu	Cys	Gly	Lys
			165						170					175	
Cys	Phe	Ala	Ala	Ala	Ser	Arg	Phe	Ile	Gln	His	Gln	Arg	Ile	His	Ser
			180					185					190		
Gly	Glu	Lys	Pro	Tyr	Ala	Cys	Pro	Glu	Cys	Ser	Lys	Thr	Phe	Thr	Arg
		195					200					205			
Ser	Ser	Asn	Leu	Ile	Lys	His	Gln	Val	Ile	His	Ser	Gly	Glu	Arg	Pro
	210					215						220			
Phe	Ala	Cys	Gly	Asp	Cys	Gly	Lys	Leu	Phe	Arg	Arg	Ser	Phe	Ala	Leu
225				230						235					240
Leu	Glu	His	Ala	Arg	Val	His	Ser	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Ser
			245						250					255	
Asp	Cys	Gly	Lys	Cys	Phe	Arg	Gly	Arg	Ser	His	Phe	Phe	Arg	His	Asn
			260					265					270		
Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	His	Cys	Leu	Asp	Cys	Gly	Lys
		275					280					285			
Ser	Phe	Ser	His	Ser	Ser	His	Leu	Ile	Lys	His	Gln	Arg	Thr	His	Arg
	290					295						300			
Gly	Val	Arg	Pro	Tyr	Ala	Cys	Pro	Leu	Cys	Gly	Lys	Ser	Phe	Ser	Arg
305					310					315					320
Arg	Ser	Asn	Leu	His	Arg	His	Glu	Lys	Ile	His	Thr	Thr	Gly	Pro	Lys
			325						330					335	
Ala	Leu	Ala	Met	Leu	Met	Leu	Gly	Ala	Ala	Ala	Ala	Gly	Ala	Leu	Ala
			340					345					350		
Thr	Pro	Pro	Pro	Ala	Pro	Thr									
			355												

&lt;210&gt; 5777

&lt;211&gt; 1431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5777

ggaaggctcg cctgggagct catacctggc tggggccgag gattggctgt tccggggcta  
60gggagcgctt tctcccggga accgcggctg tgacccaagt ggcccggacc agtttggggc  
120tgcgtgcggc ctgcctcaag caaccaggta cgtaggtcgg cgcccagct cggcgctgcg  
180gtgggagccg gagggcgaca gtcagagccg ggggtgccagc gggacgcgac cgccagatcc  
240acttaggacc ccgtcgttct gcgaagcggc cacgtctgag tcccggggcc tctcgtgct  
300gcagatgtcg ccttaggacc tcggccagga taccctctgc catgctcttg tgetgcccgt  
360gatcacccgac tggcccttgt aagcaccttc gcagcaggaa gcccagagct gcgctgccc  
420

tttctgaagg ctgtggaaga ggttgagtg ggcgcattt agcttgcccc atccccattt  
 480  
 gaggtctgtc ggagctgccc ttcaagtgtga gcattccaaa tgggtacccc agcctcggtg  
 540  
 gtcagtgagc caccctcttg gcaggccccg attgaggccc ggggcccga gaggcctcg  
 600  
 gccaacatct tccaggacgc cgagctgctg cagatccaag ccctgtttca acgcagcggg  
 660  
 gaccagctgg ccgaggaacg ggcacagatc atctgggaat gtgcagggga ccaccgtgtg  
 720  
 gctgaggccc tcaagaggct gcgcaggaag agggccccc ggcagaaacc ccctggggca  
 780  
 ctgcgtacac cactgcagcc gcctcagaat cctggagccc cactctgcac tggccaaccc  
 840  
 acagagtgcc acagagacag cctccagtga gcagtatctg cactctagga agaaaagtgc  
 900  
 caggatccgc cggaactgga ggaagtcagg cccacaagc tacctccacc agatcagaca  
 960  
 ctgatccagg gaaagagcca ggaatggcag tgtcttcctt cttgcaaaa ggctggggga  
 1020  
 ggtgaaggaa gagagacttt aggcaagcag cccaaagggg taaatgaaag caagaggctg  
 1080  
 ctgccactga cctgctccat tcagaacaag actggatgct tctgttgagc tctccattat  
 1140  
 gtgggaccca ttctcacca aaatgaggag agacagtgc tgttctgccc acagtccttc  
 1200  
 ccagtctaac actattcctg ggctgcatga tattcccttg ggagcaaagt gacaggcact  
 1260  
 tagatgcagc atttcaccac tcatgtact aatcatctac ctgtactac tgtaaacctat  
 1320  
 ggttcagca gcctgttcca caccaccaca ccatcaggat agcacaggga aactgtagtt  
 1380  
 taagtggcaa ataaaaacat ttgcatcaaa aaaaaaaaaa aaaaaaaaaa a  
 1431

&lt;210&gt; 5778

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5778

Met	Leu	Thr	Leu	Lys	Gly	Ser	Ser	Asp	Arg	Pro	Gln	Met	Gly	Met	Gly
1				5				10					15		
Gln	Ala	Lys	Met	Arg	Pro	Leu	Gln	Pro	Leu	Pro	Gln	Pro	Ser	Glu	Arg
			20				25				30				
Ala	Gly	Ala	Ala	Leu	Gly	Phe	Leu	Leu	Arg	Arg	Cys	Leu	Gln	Gly	Pro
		35				40					45				
Val	Gly	Asp	His	Gly	Gln	His	Lys	Ser	Met	Ala	Glu	Gly	Ile	Leu	Ala
	50					55				60					
Glu	Val	Leu	Arg	Arg	His	Leu	Gln	His	Glu	Glu	Ala	Pro	Gly	Leu	Arg
65					70				75					80	
Arg	Gly	Arg	Phe	Ala	Glu	Arg	Arg	Gly	Pro	Lys	Trp	Ile	Trp	Arg	Ser
			85					90						95	
Arg	Pro	Ala	Gly	Thr	Pro	Ala	Leu	Thr	Val	Ala	Leu	Arg	Leu	Pro	Pro

	100		105		110										
Gln	Arg	Arg	Ala	Gly	Pro	Pro	Thr	Tyr	Val	Pro	Gly	Cys	Leu	Arg	Gln
	115		120		125										
Ala	Ala	Arg	Ser	Pro	Lys	Leu	Val	Arg	Ala	Thr	Trp	Val	Thr	Ala	Ala
	130		135		140										
Val	Pro	Gly	Arg	Lys	Arg	Ser	Leu	Ala	Pro	Glu	Gln	Pro	Ile	Leu	Gly
145			150				155				160				
Pro	Ser	Gln	Val												

&lt;210&gt; 5779

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5779

ctcttgagac gtgtggaggg aaggaagga agaaccatg atctaccca gaggcattga  
60  
cgaggagag ggggtatttc agccttgtct ggcattcctt gtgtctgcnt gaggggtgtg  
120  
gcacacggga atgtgtgagg gtgtgtgtgc gtgcattcag ctgtgtgtgg atgtgcantc  
180  
gtgtgtgggt gtgtaggtgt gtgtgggtgt gtgcaccagt gcagggtgtgc atgggtgtgt  
240  
acagggtgggt gtgtgtatgt gtgtgggggt gtgcccattt gtgcagggtgt gtgggtgtgc  
300  
agggtcncat gcctgtgtgt ggggtgtgncc ccgtgtgtac ccctgtggag gtgtgtgggt  
360  
gtgtgcagtg t  
371

&lt;210&gt; 5780

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5780

Leu	Leu	Arg	Arg	Val	Glu	Gly	Arg	Lys	Gly	Arg	Thr	His	Asp	Leu	Pro
1				5					10					15	
Gln	Arg	His	Gly	Arg	Glu	Arg	Gly	Val	Ile	Ser	Ala	Leu	Ser	Gly	Ile
	20							25				30			
Pro	Cys	Val	Cys	Xaa	Arg	Val	Cys	Ala	His	Gly	Asn	Val	Cys	Gly	Cys
	35						40				45				
Val	Cys	Val	His	Ala	Ala	Val	Cys	Gly	Cys	Ala	Xaa	Val	Cys	Gly	Cys
	50					55				60					
Val	Gly	Val	Cys	Gly	Cys	Val	His	Gln	Cys	Arg	Cys	Ala	Trp	Val	Cys
65				70				75				80			
Thr	Gly	Gly	Cys	Val	Tyr	Val	Cys	Gly	Gly	Val	Pro	Ile	Cys	Ala	Gly
			85				90				95				
Val	Trp	Val	Cys	Arg	Val	Xaa	Cys	Leu	Cys	Val	Gly	Val	Xaa	Pro	Cys
	100						105				110				
Val	Pro	Leu	Trp	Arg	Cys	Val	Gly	Val	Cys	Ser					
	115						120								

<210> 5781  
 <211> 845  
 <212> DNA  
 <213> Homo sapiens

<400> 5781  
 ggggttccgt gccccaaaat cgaggagacc gtgggcttgg ggtccggatc gcggccgcgg  
 60  
 ggcgctggcg tgcggtgtca tttctgcggt gtaaagtctc ccaccttggc cgatttcaag  
 120  
 ccaccaggtg aggatggcac tgcaacatct tccactgagg ctccagctgc cctctcaggt  
 180  
 acatcagggc ctgganctgc ctctctcca ggagggccag gactcggccc cctgccagcc  
 240  
 cccgaagcat tgcagccagg agtgcagcgt gggggccctg caggccatgg ccaggcccca  
 300  
 gcgccaccag caccaggtca ggctggaagc cataggccag gggcagcacc aagcccaaga  
 360  
 tgcagctcag gaaaccaccg gtcactactg gcagtggcgt ggagacatgg aacatggata  
 420  
 gggcagccgc ctcttgcgcc ctgatgttca gccacagact cctcccgtca tgggcgaggt  
 480  
 ctggaggccg gtccagctgt cccagggccca cgcacagcag cctggaagaa gagctggcct  
 540  
 caggacaggt gttcatgttg tccagagtec attcccagaa ctctctgtgc ttggccagcc  
 600  
 aggatagggg tgcccacagg tcttgccgtc agaggctcag gatggccaag tgaggcttac  
 660  
 ctctgggctc cgtgggacag gcctctccga acagccacat ccagggtggc tgctgcagca  
 720  
 gaggtctggag tggctgtat accactgttc acctgtggga tgaataaaca gtggagaatg  
 780  
 aggcaccaac caactcccaa gccaggtaaa cagatccaca gttcccttca ttcggtgtgt  
 840  
 ctctg  
 845

<210> 5782  
 <211> 147  
 <212> PRT  
 <213> Homo sapiens

<400> 5782  
 Gly Val Pro Cys Pro Lys Ile Glu Gly Ala Val Gly Leu Gly Ser Gly  
 1 5 10 15  
 Ser Arg Pro Arg Gly Ala Gly Val Arg Cys His Phe Cys Gly Val Asn  
 20 25 30  
 Ala Pro Thr Leu Ala Asp Phe Lys Pro Pro Gly Glu Asp Gly Thr Ala  
 35 40 45  
 Thr Ser Ser Thr Glu Ala Pro Ala Ala Leu Ser Gly Thr Ser Gly Pro  
 50 55 60  
 Gly Xaa Ser Ser Pro Pro Gly Gly Pro Gly Leu Gly Pro Leu Pro Ala  
 65 70 75 80  
 Pro Glu Ala Leu Gln Pro Gly Val Gln Arg Gly Gly Pro Ala Gly His

	85		90		95										
Gly	Gln	Ala	Pro	Ala	Pro	Pro	Ala	Pro	Gly	Gln	Ala	Gly	Ser	His	Arg
	100				105				110						
Pro	Gly	Ala	Ala	Pro	Ser	Pro	Arg	Cys	Ser	Ser	Gly	Asn	His	Arg	Ser
	115				120				125						
Ser	Leu	Ala	Val	Ala	Trp	Arg	His	Gly	Thr	Trp	Ile	Gly	Gln	Pro	Pro
	130				135				140						
Pro	Cys	Pro													
145															

&lt;210&gt; 5783

&lt;211&gt; 1839

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5783

gtgggagcgg ccatggaccg cttcgtttgg accagcggcc tcctggagat caacgagacc  
60  
ctggtgatcc agcagcgcgg ggtgcgaatc tacgatggcg aggagaagat aaaatttgat  
120  
gctgggactc tccttcttag tacacaccga ctgatttga gagatcagaa aaatcatgag  
180  
tgttgcatgg ccattctcct ttcccaaatt gtgttcattg aagaacaggc ggctggaatt  
240  
gggaagagtg ccaaaatagt ggttcattct caccagctc ctcttaacaa agaacctggc  
300  
ccattccaga gtagtaagaa ctctacatc aaactctcct tcaaagaaca tggccagatt  
360  
gagttttaca ggcgtttatc agaggaaatg acacaaagaa gatgggagaa tatgccagtt  
420  
tcccagtcac tacaacaaa tagaggaccc cagccaggaa gaataagggc tgtaggaatt  
480  
gtaggtattg aaaggaaact ggaagaaaaa agaaaagaaa ctgacaaaaa ctttctgag  
540  
gcctttgaag acctcagcaa actaatgac aaggctaagg aaatggtgga attatcaaaa  
600  
tcaattgcta ataaaattaa agacaaacaa ggtgacatca cagaagatga gaccatcagg  
660  
tttaaatcct acttgctgag catgggaata gctaaccag ttaccagaga aacctacggc  
720  
tcaggcacac agtaccacat gcagctggcc aaacaactgg ctggaatatt gcaggtgcct  
780  
ttagaggaac gagggggaat aatgtcactc acggaggtgt actgcttagt aaaccgagct  
840  
cgaggaatgg aattgctctc accagaagat ttagtgaatg cgtgcaagat gctggaagca  
900  
ctgaaattac ctctcaggct ccgtgtgttt gacagtggcg tcatggtaat tgagcttcag  
960  
tctcacaagg aagaggaaat ggtggcctcg gccctggaga cagtttcaga aaagggatcc  
1020  
ctaacatcag aagagtttgc taagcttgtg ggaatgtctg tcctcctagc caaagaaagg  
1080  
ttgctgcttg cagagaagat gggccatctt tgccgtgatg actcagtgga aggcctgcgt  
1140

ttttacccaa atttatttat gacacagagc taagggtttt gtatttataaa tcctttttgt  
 1200  
 ccatatgctt gcgtcatgta gaggttgat gacattgagc taagagataa accccgatca  
 1260  
 attgagaatt tattggaact tcacagtgc atgtaaatct cttttaattt ctccccaaat  
 1320  
 atggtccagg aaatttattt agtatacgca taggaaaatt cagaaaagt aatgccaaata  
 1380  
 tgaattttaa atcatgctat agtgcagaac cctcagagtt taacttgga tatagtggat  
 1440  
 ttttaactga tectcaaatc taatcatttt ataaagaagg gaatttagtt ttgcagagaa  
 1500  
 taaaaagaga agttgcatgt tcagacaggt tagattatta ttttggtgta actgaaattc  
 1560  
 actgattgca catgacaatg ttgggacaaa atatactgca gcatgctata tgaggtcct  
 1620  
 ccccgaggct tttagaagca gtcatagaca tgtcttcaac ataccaaata aaataccttt  
 1680  
 aaaaatgaaa taattttatt tgacacatta tttatatata ttctatctag gtttctcttt  
 1740  
 gtttttttta aagtgatgat ttcattggact gggcatttaa aagaaatggc aactgtggtc  
 1800  
 catttttggc ttttccaaat gctgtggaat ttttgaaa  
 1839

&lt;210&gt; 5784

&lt;211&gt; 386

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5784

Met	Asp	Arg	Phe	Val	Trp	Thr	Ser	Gly	Leu	Leu	Glu	Ile	Asn	Glu	Thr
1			5					10					15		
Leu	Val	Ile	Gln	Arg	Gly	Val	Arg	Ile	Tyr	Asp	Gly	Glu	Glu	Lys	
		20					25				30				
Ile	Lys	Phe	Asp	Ala	Gly	Thr	Leu	Leu	Ser	Thr	His	Arg	Leu	Ile	
		35				40					45				
Trp	Arg	Asp	Gln	Lys	Asn	His	Glu	Cys	Cys	Met	Ala	Ile	Leu	Leu	Ser
	50				55					60					
Gln	Ile	Val	Phe	Ile	Glu	Glu	Gln	Ala	Ala	Gly	Ile	Gly	Lys	Ser	Ala
	65			70					75				80		
Lys	Ile	Val	Val	His	Leu	His	Pro	Ala	Pro	Pro	Asn	Lys	Glu	Pro	Gly
			85					90					95		
Pro	Phe	Gln	Ser	Ser	Lys	Asn	Ser	Tyr	Ile	Lys	Leu	Ser	Phe	Lys	Glu
		100					105						110		
His	Gly	Gln	Ile	Glu	Phe	Tyr	Arg	Arg	Leu	Ser	Glu	Glu	Met	Thr	Gln
		115					120					125			
Arg	Arg	Trp	Glu	Asn	Met	Pro	Val	Ser	Gln	Ser	Leu	Gln	Thr	Asn	Arg
		130					135					140			
Gly	Pro	Gln	Pro	Gly	Arg	Ile	Arg	Ala	Val	Gly	Ile	Val	Gly	Ile	Glu
	145			150					155					160	
Arg	Lys	Leu	Glu	Glu	Lys	Arg	Lys	Glu	Thr	Asp	Lys	Asn	Ile	Ser	Glu
			165					170					175		
Ala	Phe	Glu	Asp	Leu	Ser	Lys	Leu	Met	Ile	Lys	Ala	Lys	Glu	Met	Val

```
<210> 5785
<211> 785
<212> DNA
<213> Homo sapiens
```

```

<400> 5785
tttttttttt ttttgacagt ttctccactt tattagcctg gagctcctcc ctgccagccc
60
caggggcttg tcgctggtec ctgggcacag tgagcagggc tgaggtcaga cgggttcggc
120
ccttggccat ggcagcttgg ttgggacagc cgggccaaagg gaaaaaaagg tgcaaaagtc
180
caaatgctgg cacttcaggt gtggccggca cccagccagg cgcagtgggt gggcagggcg
240
ccatgcttct ctctggcgga caggtcggcc gtgtagcagc gccccctccc agcagccact
300
aggaacagct ggtgattctc gccaggaact gctgcgccca ccactcgtct aggtcaatgg
360
gcacaaagtt ctgcagccgg ggattggggg tcctctccac gtactgcaca ggcttggcc
420
cgccctcacc ggctgggcca ccatccagct gctgttgcac ctgctgccag gcttcggaca
480
caaagcggac attctccttg tgggccagtg tgtaggtctc ctgggtcccc tggaggggatg
540
gggacttgga ggggtccgc cggcgattca cacgattgaa cacaagcctt ggccctgcac
600

```



tcgacagggg ccaggggtccc agcgggtgcg cgagagctgc gcccgctggg gctgcaaggt  
 660  
 cgggcgcgcg ggctgccggc ttttcaggag ctcttgagc tggcccttca cctgctgctg  
 720  
 cgtgagacct gtgcggctgc gcgaccaatt tgctgggccc gttgatgatg gtgtacatgg  
 780  
 cgcgcg  
 785

<210> 5786

<211> 159

<212> PRT

<213> Homo sapiens

<400> 5786

Met	Tyr	Thr	Ile	Ile	Asn	Gly	Pro	Ser	Lys	Leu	Val	Ala	Gln	Pro	His
1				5					10					15	
Arg	Ser	His	Ala	Ala	Ala	Gly	Glu	Gly	Pro	Ala	Pro	Gly	Ala	Pro	Glu
			20					25					30		
Lys	Pro	Ala	Ala	Arg	Ala	Ala	Asp	Leu	Ala	Ala	Pro	Ala	Gly	Ala	Ala
		35					40					45			
Leu	Ala	Gln	Pro	Leu	Gly	Pro	Trp	Pro	Leu	Ser	Ser	Ala	Gly	Pro	Arg
		50				55					60				
Leu	Val	Phe	Asn	Arg	Val	Asn	Arg	Arg	Arg	Asp	Pro	Ser	Lys	Ser	Pro
65					70					75				80	
Ser	Leu	Gln	Gly	Thr	Gln	Glu	Thr	Tyr	Thr	Leu	Ala	His	Lys	Glu	Asn
			85					90					95		
Val	Arg	Phe	Val	Ser	Glu	Ala	Trp	Gln	Gln	Val	Gln	Gln	Gln	Leu	Asp
			100					105					110		
Gly	Gly	Pro	Ala	Gly	Glu	Gly	Gly	Pro	Arg	Pro	Val	Gln	Tyr	Val	Glu
		115					120					125			
Arg	Thr	Pro	Asn	Pro	Arg	Leu	Gln	Asn	Phe	Val	Pro	Ile	Asp	Leu	Asp
		130				135					140				
Glu	Trp	Trp	Ala	Gln	Gln	Phe	Leu	Ala	Arg	Ile	Thr	Ser	Cys	Ser	
145					150					155					

<210> 5787

<211> 1683

<212> DNA

<213> Homo sapiens

<400> 5787

nnngctccag tccagtcgtg cagnngngng ntctttcttc cgctcaagtc caggaacggt  
 60  
 tcccgggctc ccaccgtctc ggnangccca cgngcctggg ccaaagtccg cgaacggaag  
 120  
 ccngggcgag gaggattctg ggagttggag gccgaggctg cgaccngcag gcgcaaacct  
 180  
 gcccctgggg tgagggtgt aagtggcgcg attcgcgga gcgccccgat ggaacctct  
 240  
 ggtcctgtga gggggccctt gcaagattcc agctggtagt agccttctgc agagctagt  
 300  
 cagactagga tggtgtatc actaacagca gctgaaactc tggcccttca gggtagacag  
 360

ggacaagaga agatgatgat gatgggacca aaggaagagg aacagtcttg tgagtatgag  
420  
accaggetac ctgggaacca ctctaccagt caagagatct tccgccaacg cttcaggcat  
480  
ctccgctacc aggagactcc tgggtccccg gaggccttga gccaaactacg agtactctgc  
540  
tgtgagtggc tgaggccaga gaaacacacg aaggagcaga tcttgaggtt cctgggtgctg  
600  
gaacaattct tgaccatcct gcctgaggag ctccaatcct ggggtgcggg acatcacccct  
660  
aagagtggag aggaggctgt gactgtgctg gaggatttag agaaaggact tgaaccagag  
720  
ccgcaggtcc caggccctgc acatggacct gcacaggaag agccatggga gaagaaggaa  
780  
tctctgggag cagcccagga agcactgagc atccagctcc agcctaagga gaccagcct  
840  
ttcccaaaga gtgaacaggt atattttacat tttctgtcag ttgttacaga agatggccca  
900  
gagcccaagg acaaaggatc attgccacaa ccaccatta ctgaagtga atcacaggtg  
960  
ttctcagaaa aacttgctac tgacacctct acatttgaag ctacctctga gggtagctta  
1020  
gaactgcagc agagaaatcc caaagcggag agactgaggt ggtccctgc ccaggaggaa  
1080  
agtttcaggc agatgggtgt catccataag gaaattccca cagggaagaa agaccatgaa  
1140  
tgtagtgaat gtggtaaaac cttcatttat aactcacatc ttgttgcca ccagagagtt  
1200  
cattctggag agaaacccta taagtgtagt gactgtggga aaactttcaa acagagctca  
1260  
aacctcggtc agcatcagag aattcataca ggagagaaac ccttcgaatg taatgaatgt  
1320  
gggaaggcct tcagatgggg tgctcatctt gtccagcatc agaggattca ctcaggagag  
1380  
aagccctatg agtgtaatga gtgtgggaag gccttttagtc aaagctcata tctaagtcag  
1440  
catcggagaa ttcacagtgg agagaaacct tttatatgta aagaatgtgg gaaagcttat  
1500  
ggatgggtct cagagctcat tagacatcgg agagtctatg ccagaaaaga gccttcccat  
1560  
tgaattgaag gggagaacgt ctccagacag aattctacat cgttctaata tacttttagga  
1620  
ctggatccca taaaagttat aagttcctta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1680  
aaa  
1683

&lt;210&gt; 5788

&lt;211&gt; 417

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5788

Met Ala Val Ser Leu Thr Ala Ala Glu Thr Leu Ala Leu Gln Gly Thr

1	5	10	15
Gln Gly Gln Glu Lys Met Met Met Met Gly Pro Lys Glu Glu Glu Gln			
20	25	30	
Ser Cys Glu Tyr Glu Thr Arg Leu Pro Gly Asn His Ser Thr Ser Gln			
35	40	45	
Glu Ile Phe Arg Gln Arg Phe Arg His Leu Arg Tyr Gln Glu Thr Pro			
50	55	60	
Gly Pro Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp			
65	70	75	80
Leu Arg Pro Glu Lys His Thr Lys Glu Gln Ile Leu Glu Phe Leu Val			
85	90	95	
Leu Glu Gln Phe Leu Thr Ile Leu Pro Glu Glu Leu Gln Ser Trp Val			
100	105	110	
Arg Gly His His Pro Lys Ser Gly Glu Glu Ala Val Thr Val Leu Glu			
115	120	125	
Asp Leu Glu Lys Gly Leu Glu Pro Glu Pro Gln Val Pro Gly Pro Ala			
130	135	140	
His Gly Pro Ala Gln Glu Glu Pro Trp Glu Lys Lys Glu Ser Leu Gly			
145	150	155	160
Ala Ala Gln Glu Ala Leu Ser Ile Gln Leu Gln Pro Lys Glu Thr Gln			
165	170	175	
Pro Phe Pro Lys Ser Glu Gln Val Tyr Leu His Phe Leu Ser Val Val			
180	185	190	
Thr Glu Asp Gly Pro Glu Pro Lys Asp Lys Gly Ser Leu Pro Gln Pro			
195	200	205	
Pro Ile Thr Glu Val Glu Ser Gln Val Phe Ser Glu Lys Leu Ala Thr			
210	215	220	
Asp Thr Ser Thr Phe Glu Ala Thr Ser Glu Gly Thr Leu Glu Leu Gln			
225	230	235	240
Gln Arg Asn Pro Lys Ala Glu Arg Leu Arg Trp Ser Pro Ala Gln Glu			
245	250	255	
Glu Ser Phe Arg Gln Met Val Val Ile His Lys Glu Ile Pro Thr Gly			
260	265	270	
Lys Lys Asp His Glu Cys Ser Glu Cys Gly Lys Thr Phe Ile Tyr Asn			
275	280	285	
Ser His Leu Val Val His Gln Arg Val His Ser Gly Glu Lys Pro Tyr			
290	295	300	
Lys Cys Ser Asp Cys Gly Lys Thr Phe Lys Gln Ser Ser Asn Leu Gly			
305	310	315	320
Gln His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Glu Cys Asn Glu			
325	330	335	
Cys Gly Lys Ala Phe Arg Trp Gly Ala His Leu Val Gln His Gln Arg			
340	345	350	
Ile His Ser Gly Glu Lys Pro Tyr Glu Cys Asn Glu Cys Gly Lys Ala			
355	360	365	
Phe Ser Gln Ser Ser Tyr Leu Ser Gln His Arg Arg Ile His Ser Gly			
370	375	380	
Glu Lys Pro Phe Ile Cys Lys Glu Cys Gly Lys Ala Tyr Gly Trp Cys			
385	390	395	400
Ser Glu Leu Ile Arg His Arg Arg Val His Ala Arg Lys Glu Pro Ser			
405	410	415	
His			

<210> 5789  
<211> 1201  
<212> DNA  
<213> Homo sapiens

<400> 5789  
nngcggccgc agcctgagcc agggccccct ccctcgtcag gaccggggca gcaagcaggc  
60  
cgggggcagg tccgggcacc caccatgcga ggcgagctct ggctcctggt gctggtgctc  
120  
agggaggctg cccgggcgct gagccccag cccggagcag gtcacgatga gggcccaggc  
180  
tctggatggg ctgccaaagg gaccgtgcgg ggctggaacc ggagagcccg agagagccct  
240  
gggcatgtgt cagagccgga caggaccag ctgagccagg acctgggtgg gggcaccctg  
300  
gccatggaca cgctgccaga taacaggacc aggggtggtg aggacaacca cagctattat  
360  
gtgtcccgtc tctatggccc cagcgagccc cacagccggg aactgtgggt agatgtggcc  
420  
gaggccaacc ggagccaagt gaagatccac acaatactct ccaacaccca ccggcaggct  
480  
tcgagagtgg tcttgtcctt tgatttcctt ttctacgggc atcctctgcg gcagatcacc  
540  
atagcaactg gaggttcat cttcatgggg gacgtgatcc atcggtgct cacagctact  
600  
cagtatgtgg cgccctgat ggccaacttc aacctggct actccgacaa ctccacagtt  
660  
gtttactttg acaatgggac agtctttgtg gttcagtggg accacgttta tctccaaggc  
720  
tggaagaca agggcagttt caccttcag gcagctctgc accatgacgg ccgcattgtc  
780  
tttgctata aagagatccc tatgtctgtc ccggaaatca gctcctcca gcacctgtc  
840  
aaaaccggcc tatcggtgct cttcatgatt ctcaatccat ccccggtgt gccagaatct  
900  
cggcgaagga gcatctttga ataccaccgc atagagctgg acccagcaa ggtcaccagc  
960  
atgtcgccg tggagttcac ccattgccg acctgctgc agcataggag ctgtgacgcc  
1020  
tgcattgctt cagacctgac cttcaactgc agctgggtgcc atgtcctcca gagatgctcc  
1080  
agtggctttg accgctatcg ccaggagtgg atggactatg gctgtgcaca ggaggcagag  
1140  
ggcaggatgt gcgaggactt ccaggatgag gaccacgact cagcctcccc tgacactttc  
1200  
t  
1201

<210> 5790  
<211> 400  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 5790

Xaa Arg Pro Gln Pro Glu Pro Gly Pro Pro Pro Ser Ser Gly Pro Gly  
 1 5 10 15  
 Gln Gln Ala Gly Arg Gly Gln Val Arg Ala Pro Thr Met Arg Gly Glu  
 20 25 30  
 Leu Trp Leu Leu Val Leu Val Leu Arg Glu Ala Ala Arg Ala Leu Ser  
 35 40 45  
 Pro Gln Pro Gly Ala Gly His Asp Glu Gly Pro Gly Ser Gly Trp Ala  
 50 55 60  
 Ala Lys Gly Thr Val Arg Gly Trp Asn Arg Arg Ala Arg Glu Ser Pro  
 65 70 75 80  
 Gly His Val Ser Glu Pro Asp Arg Thr Gln Leu Ser Gln Asp Leu Gly  
 85 90 95  
 Gly Gly Thr Leu Ala Met Asp Thr Leu Pro Asp Asn Arg Thr Arg Val  
 100 105 110  
 Val Glu Asp Asn His Ser Tyr Tyr Val Ser Arg Leu Tyr Gly Pro Ser  
 115 120 125  
 Glu Pro His Ser Arg Glu Leu Trp Val Asp Val Ala Glu Ala Asn Arg  
 130 135 140  
 Ser Gln Val Lys Ile His Thr Ile Leu Ser Asn Thr His Arg Gln Ala  
 145 150 155 160  
 Ser Arg Val Val Leu Ser Phe Asp Phe Pro Phe Tyr Gly His Pro Leu  
 165 170 175  
 Arg Gln Ile Thr Ile Ala Thr Gly Gly Phe Ile Phe Met Gly Asp Val  
 180 185 190  
 Ile His Arg Met Leu Thr Ala Thr Gln Tyr Val Ala Pro Leu Met Ala  
 195 200 205  
 Asn Phe Asn Pro Gly Tyr Ser Asp Asn Ser Thr Val Val Tyr Phe Asp  
 210 215 220  
 Asn Gly Thr Val Phe Val Val Gln Trp Asp His Val Tyr Leu Gln Gly  
 225 230 235 240  
 Trp Glu Asp Lys Gly Ser Phe Thr Phe Gln Ala Ala Leu His His Asp  
 245 250 255  
 Gly Arg Ile Val Phe Ala Tyr Lys Glu Ile Pro Met Ser Val Pro Glu  
 260 265 270  
 Ile Ser Ser Ser Gln His Pro Val Lys Thr Gly Leu Ser Asp Ala Phe  
 275 280 285  
 Met Ile Leu Asn Pro Ser Pro Asp Val Pro Glu Ser Arg Arg Arg Ser  
 290 295 300  
 Ile Phe Glu Tyr His Arg Ile Glu Leu Asp Pro Ser Lys Val Thr Ser  
 305 310 315 320  
 Met Ser Ala Val Glu Phe Thr Pro Leu Pro Thr Cys Leu Gln His Arg  
 325 330 335  
 Ser Cys Asp Ala Cys Met Ser Ser Asp Leu Thr Phe Asn Cys Ser Trp  
 340 345 350  
 Cys His Val Leu Gln Arg Cys Ser Ser Gly Phe Asp Arg Tyr Arg Gln  
 355 360 365  
 Glu Trp Met Asp Tyr Gly Cys Ala Gln Glu Ala Glu Gly Arg Met Cys  
 370 375 380  
 Glu Asp Phe Gln Asp Glu Asp His Asp Ser Ala Ser Pro Asp Thr Phe  
 385 390 395 400

&lt;210&gt; 5791

&lt;211&gt; 3285

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5791

ntgtacattg tataaactga gtagcattga actgcatttt agaagtatgt catcagaaac  
60  
aaatcacatt atggaaagga tatacaaag ccaagtata tgactctttt ggcatggtg  
120  
tagcatggtc cattcagctt tcagaatctt tcggaggctc tagtttggtg cctagtacta  
180  
gttatttttg ttagaacaat ctctcaaat ttagataatt ttccagttgt atgtctgtca  
240  
cttttaactc taaagcgtaa gaatcatggt aaccctctcc tcccccgcc gtccccgcg  
300  
ctccatctc cgccgccc cgagcagctg cggggccg accgcccgc cgcgcttgc  
360  
aggctgagtc atcactagag agtgggaagg gcagcagcag cagagaatcc aaaccctaaa  
420  
gctgatatca caaagtacca tttctccaag ttgggggctc agaggggagt catcatgagc  
480  
gatgttacca ttgtgaaaga aggttgggtt cagaagaggg gagaatatat aaaaaactgg  
540  
aggccaagat acttcctttt gaagacagat ggctcattca taggatataa agagaaacct  
600  
caagatgttg atttacctta tccctcaac aacttttcag tggcaaatg ccagttaatg  
660  
aaaacagaac gaccaaagcc aaacacattt ataatcagat gtctccagtg gactactgtt  
720  
atagagagaa catttcatgt agatactcca gaggaaggg aagaatggac agaagctatc  
780  
caggctgtag cagacagact gcagaggcaa gaagaggaga gaatgaattg tagtccaact  
840  
tcacaaattg ataatatagg agaggaagag atggatgcct ctacaacca tcataaaaga  
900  
aagacaatga atgattttga ctatttgaaa ctactaggta aaggcacttt tgggaaagtt  
960  
attttggttc gagagaaggc aagtggaaaa tactatgcta tgaagattct gaagaaagaa  
1020  
gtcattattg caaaggatga agtggcacac actctaactg aaagcagagt attaaagaac  
1080  
actagacatc cttttttaac atccttgaaa tattccttcc agacaaaaga ccgtttgtgt  
1140  
tttgtgatgg aatatgttaa tggggcgag ctgttttcc atttgctgag agagcgggtg  
1200  
ttctctgagg accgcacag tttctatggt gcagaaattg tctctgcctt ggactatcta  
1260  
cattccggaa agattgtgta ccgtgatctc aagttggaga atctaattgct ggacaaagat  
1320  
ggccacataa aaattacaga ttttgactt tgcaaagaag ggatcacaga tgcagccacc  
1380  
atgaagacat cctgtggcac tccagaatat ctggcaccag aggtgttaga agataatgac  
1440  
tatggccgag cagtagactg gtggggccta ggggttgta tgtatgaaat gatgtgtggg  
1500

aggttacctt tctacaacca ggaccatgag aaactttttg aattaatatt aatggaagac  
1560  
attaaatttc ctggaacact ctcttcagat gcaaaatcat tgctttcagg gctcttgata  
1620  
aaggatccaa ataaacgcct tgggtggagga ccagatgatg caaaagaaat tatgagacac  
1680  
agttttcttct ctggagtaaa ctggcaagat gtatatgata aaaagcttgt acctcctttt  
1740  
aaacctcaag taacatctga gacagatact agatatattg atgaagaatt tacagctcag  
1800  
actattacaa taacaccacc tgaaaaatat gatgaggatg gtatggactg catggacaat  
1860  
gagaggcggc cgcatttccc tcaattttcc tactctgcaa gtggacgaga ataagtctct  
1920  
ttcattctgc tacttcactg tcatcttcaa tttattactg aaaatgattc ctggacatca  
1980  
ccagtcctag ctcttacaca tagcaggggc acctccgac atcccagacc agccaagggg  
2040  
cctcacccct cgccaccttt caccctcatg aaaacacaca tacacgcaaa tacactccag  
2100  
tttttgtttt tgcataaaat tgtatctcag tctaaggctc catgctgttg ctgctactgt  
2160  
cttactatta tagcaacttt aagaagtaat ttccaacct ttggaagtca tgagcccacc  
2220  
attgttcatt tgtgcaccaa ttatcatctt ttgatctttt agtttttccc tcagtgaagg  
2280  
ctaaatgaga tacactgatt ctagggtacat tttttaactt tctagaagag aaaaactaac  
2340  
tagactaaga agatttagtt tataaattca gaacaagcaa ttgtggaagg gtggtggcgt  
2400  
gcatatgtaa agcacatcag atccgtgcgt gaagtaggca tatatcacta agctgtggct  
2460  
ggaattgatt aggaagcatt tggtagaagg actgaacaac tgttgggata tatatatata  
2520  
tatataattt ttttttttta aattcctggg ggatactgta gaagaagccc atatcacatg  
2580  
tggatgtcga gacttcacgg gcaatcatga gcaagtgaac actgttctac caagaactga  
2640  
aggcatatgc acagtcaagg tcacttaaag ggtcttatga aacaatttga gccagagagc  
2700  
atctttcccc tgtgcttgga aacctttttt cttcttgac atttatcacc tctgatggct  
2760  
gaagaatgta gacaggtata atgatactgc ttttcaccaa aatttctaca ccaaggtaaa  
2820  
caggtgtttg ccttatttaa tttttactt tcagttctac gtgaattagc tttttctcag  
2880  
atgttgaaac tttgaatgtc cttttatgat ttgtttata ttgcagtagt atttattttt  
2940  
tagtgatgag aattgtatgt catgttagca aacgcagctc caacttatat aaaatagact  
3000  
tactgcagtt acttttgacc catgtgcaag gattgtacac gttgatgaga atcatgcact  
3060  
ttttctctc tgtaaaaaa aatgataagg ctctgaaatg gaatatattg gttagaattt  
3120

ggctttggga gaagagatgc tgccatttaa ccccttggtg ctgaaaatga gaaaatcccc  
 3180  
 aactatgcat gccaaaggggt taatgaacaa aatagctgtt gacgtttgct catttaagaa  
 3240  
 tttgaaacgt tatgatgacc tggcaacaaa aaaaaaaaaa aaaaa  
 3285

<210> 5792

<211> 479

<212> PRT

<213> Homo sapiens

<400> 5792

Met	Ser	Asp	Val	Thr	Ile	Val	Lys	Glu	Gly	Trp	Val	Gln	Lys	Arg	Gly
1				5					10					15	
Glu	Tyr	Ile	Lys	Asn	Trp	Arg	Pro	Arg	Tyr	Phe	Leu	Leu	Lys	Thr	Asp
			20					25					30		
Gly	Ser	Phe	Ile	Gly	Tyr	Lys	Glu	Lys	Pro	Gln	Asp	Val	Asp	Leu	Pro
		35					40					45			
Tyr	Pro	Leu	Asn	Asn	Phe	Ser	Val	Ala	Lys	Cys	Gln	Leu	Met	Lys	Thr
		50				55					60				
Glu	Arg	Pro	Lys	Pro	Asn	Thr	Phe	Ile	Ile	Arg	Cys	Leu	Gln	Trp	Thr
65					70					75				80	
Thr	Val	Ile	Glu	Arg	Thr	Phe	His	Val	Asp	Thr	Pro	Glu	Glu	Arg	Glu
			85						90					95	
Glu	Trp	Thr	Glu	Ala	Ile	Gln	Ala	Val	Ala	Asp	Arg	Leu	Gln	Arg	Gln
			100					105					110		
Glu	Glu	Glu	Arg	Met	Asn	Cys	Ser	Pro	Thr	Ser	Gln	Ile	Asp	Asn	Ile
		115				120						125			
Gly	Glu	Glu	Glu	Met	Asp	Ala	Ser	Thr	Thr	His	His	Lys	Arg	Lys	Thr
		130				135						140			
Met	Asn	Asp	Phe	Asp	Tyr	Leu	Lys	Leu	Leu	Gly	Lys	Gly	Thr	Phe	Gly
145					150					155					160
Lys	Val	Ile	Leu	Val	Arg	Glu	Lys	Ala	Ser	Gly	Lys	Tyr	Tyr	Ala	Met
			165						170					175	
Lys	Ile	Leu	Lys	Lys	Glu	Val	Ile	Ile	Ala	Lys	Asp	Glu	Val	Ala	His
		180						185					190		
Thr	Leu	Thr	Glu	Ser	Arg	Val	Leu	Lys	Asn	Thr	Arg	His	Pro	Phe	Leu
		195				200						205			
Thr	Ser	Leu	Lys	Tyr	Ser	Phe	Gln	Thr	Lys	Asp	Arg	Leu	Cys	Phe	Val
		210				215					220				
Met	Glu	Tyr	Val	Asn	Gly	Gly	Glu	Leu	Phe	Phe	His	Leu	Ser	Arg	Glu
225				230						235					240
Arg	Val	Phe	Ser	Glu	Asp	Arg	Thr	Arg	Phe	Tyr	Gly	Ala	Glu	Ile	Val
			245						250					255	
Ser	Ala	Leu	Asp	Tyr	Leu	His	Ser	Gly	Lys	Ile	Val	Tyr	Arg	Asp	Leu
		260						265					270		
Lys	Leu	Glu	Asn	Leu	Met	Leu	Asp	Lys	Asp	Gly	His	Ile	Lys	Ile	Thr
		275				280						285			
Asp	Phe	Gly	Leu	Cys	Lys	Glu	Gly	Ile	Thr	Asp	Ala	Ala	Thr	Met	Lys
		290				295					300				
Thr	Ser	Cys	Gly	Thr	Pro	Glu	Tyr	Leu	Ala	Pro	Glu	Val	Leu	Glu	Asp
305				310						315				320	
Asn	Asp	Tyr	Gly	Arg	Ala	Val	Asp	Trp	Trp	Gly	Leu	Gly	Val	Val	Met



	325		330		335										
Tyr	Glu	Met	Met	Cys	Gly	Arg	Leu	Pro	Phe	Tyr	Asn	Gln	Asp	His	Glu
	340		345		350										
Lys	Leu	Phe	Glu	Leu	Ile	Leu	Met	Glu	Asp	Ile	Lys	Phe	Pro	Arg	Thr
	355		360		365										
Leu	Ser	Ser	Asp	Ala	Lys	Ser	Leu	Leu	Ser	Gly	Leu	Leu	Ile	Lys	Asp
	370		375		380										
Pro	Asn	Lys	Arg	Leu	Gly	Gly	Pro	Asp	Asp	Ala	Lys	Glu	Ile	Met	
	385		390		395									400	
Arg	His	Ser	Phe	Phe	Ser	Gly	Val	Asn	Trp	Gln	Asp	Val	Tyr	Asp	Lys
			405						410					415	
Lys	Leu	Val	Pro	Pro	Phe	Lys	Pro	Gln	Val	Thr	Ser	Glu	Thr	Asp	Thr
			420					425						430	
Arg	Tyr	Phe	Asp	Glu	Glu	Phe	Thr	Ala	Gln	Thr	Ile	Thr	Ile	Thr	Pro
			435					440						445	
Pro	Glu	Lys	Tyr	Asp	Glu	Asp	Gly	Met	Asp	Cys	Met	Asp	Asn	Glu	Arg
	450					455					460				
Arg	Pro	His	Phe	Pro	Gln	Phe	Ser	Tyr	Ser	Ala	Ser	Gly	Arg	Glu	
	465				470						475				

&lt;210&gt; 5793

&lt;211&gt; 2767

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5793

```

aattcggcac taggggcagc tgtcggctgg aaggaactgg tctgctcaca cttgctggct
60
tgcgcatcag gactggcttt atctcctgac tcacggtgca aaggtgcact ctgccaacgt
120
taagtcgctc cccagcgctt ggaatcctac ggccccca gccggatccc ctcagccttc
180
caggtcctca actcccgctg acgctgaaca atggcctcca tggggctaca ggtaatgggc
240
atcgcgctgg ccgtcctggg ctggctggcc gtcctgctgt gctgcgcgct gcccatgtgg
300
cgcgtagcgg ccttcacgag cagcaacatt gtcacctcgc agaccatctg ggagggccta
360
tggatgaact gcgtggtgca gagcaccggc cagatgcagt gcaaggtgta cgactcgctg
420
ctggcactgc cgcaggacct gcaggcggcc cgcgcctcgc tcacatcag catcatcgtg
480
gctgctctgg gcgtgctgct gtccgtgggtg gggggcaagt gtaccaactg cctggaggat
540
gaaagcgcca aggccaagac catgatcgtg gcgggcgtgg tgttctctgt ggccggcctt
600
atgggtgatag tgccggtgct ctggacggcc cacaacatca tccaagactt ctacaatccg
660
ctgggtggct ccgggcagaa gcgggagatg ggtgcctcgc tctacgtcgg ctggggcgcc
720
tccggcctgc tgctccttgg cggggggctg ctttctgca actgtccacc ccgcacagac
780
aagccttact ccgccaagta ttctgctgcc cgctctgctg ctgccagcaa ctacgtgtaa
840

```

gggtgccacgg ctccactctg ttctctctg ctttgttctt ccctggactg agctcagcgc  
900  
aggctgtgac cccaggaggg ccctgccacg ggccactggc tgctggggac tggggactgg  
960  
gcagagactg agccaggcag gaaggcagca gccttcagcc tctctggccc actcggacaa  
1020  
cttcccaagg ccgcctctg ctagcaagaa cagagtcac cctcctctgg atattgggga  
1080  
gggacggaag tgacagggg tggtgggtgga gtggggagct ggcttctgct ggccaggata  
1140  
gcttaaccct gactttggga tctgcctgca tcggcggttg ccaactgtccc catttacatt  
1200  
ttccccactc tgtctgcctg catctcctct gtccgggta ggcttgata tcacctctgg  
1260  
gactgtgect tgctcacga aaccgcgcc caggagtatg gctgaggcct tgcccaccca  
1320  
cctgcctggg aagtgcagag tggatggacg ggtttagagg ggaggggcca aggtgctgta  
1380  
aacaggtttg ggagtggtg ggggaggggg ccagagaggc ggctcaggtt gccagctct  
1440  
gtggcctcag gactctctgc ctccccgct tcagcccagg gccctggag actgatcccc  
1500  
tctgagtcct ctgccccctc caaggacact aatgagcctg ggaggggtggc agggaggagg  
1560  
ggacagcttc acccttgaa gtccctgggt ttttctctt ccttcttctg ggttctgtt  
1620  
ttgtaattta agaagagcta ttcatcactg taattattat tttttctac aataaatggg  
1680  
acctgtgcac aggaggaaaa aaaaaaaaaa aaaaggagac cacagcctgc caaggagca  
1740  
gctgccaaa tgttctctga cccgtgacct agagatgaag taatttgatt tatccctat  
1800  
ttcctttagt ctcaatggct aaggggtaat ggatggaaat ggggagaatg accgagtaga  
1860  
ggcaaggacg aagctcattc ttaaagaaaa acctcaaagt tcaacttcaa acagctgaaa  
1920  
tttgtttcat agctgttgg caccagttc tagccaacca ggaataaatt atagttttgc  
1980  
cacctcagca gatggcaaaa ggagctttcc agaactttgg cctggtctgc accagggtacc  
2040  
aacatcacag ctgctaaaat caccagaagg gattttggaa ccgctgtact agtgtccttt  
2100  
cattcgatgg gatgtccagg cttcacccca aagaggcttc atttatgctt cttctcctgt  
2160  
gtgctggtga accaagagtc taggagcttc ttgctgtagt acaactgcca ggcactgact  
2220  
tgactgcca acaccaacac caggtacatg atggaaacgg cagaaaaacc aaaggagaaa  
2280  
cggtaggcct tgccatggcg gtagagctgc tgtgcagcag ggaacatctc catgctgcca  
2340  
taaagtgtg gagcgatgga aaagagtccc atgctgatca tggagagcac caggtagcta  
2400  
atgttgttgc ggggaaagga gagaaggccc aagagagagg gcaaaatgct cagcaaatac  
2460

ggggtattccc actgataggg catggccacc tgatcatgtg acaagagcct caggtgtccc  
 2520  
 acgctcatct tagcaaccag cagcagccat atgaccagat gtacgtagat cagcttcttg  
 2580  
 atttcatact tgagggtcac actcatctgg tagtgcatgg cgacgcgctc ccggtgctga  
 2640  
 aagtcgctgc cgtcggtgcc ggccgctcgc gggcctgctc gagacgccat tgtgctgccc  
 2700  
 cagaaccccc gaaccctca cgcggacctg gtaccgcaac gacagccaag cggcccagtg  
 2760  
 accctat  
 2767

<210> 5794

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5794

Met	Ala	Ser	Met	Gly	Leu	Gln	Val	Met	Gly	Ile	Ala	Leu	Ala	Val	Leu
1				5					10					15	
Gly	Trp	Leu	Ala	Val	Met	Leu	Cys	Cys	Ala	Leu	Pro	Met	Trp	Arg	Val
		20					25						30		
Thr	Ala	Phe	Ile	Gly	Ser	Asn	Ile	Val	Thr	Ser	Gln	Thr	Ile	Trp	Glu
	35					40					45				
Gly	Leu	Trp	Met	Asn	Cys	Val	Val	Gln	Ser	Thr	Gly	Gln	Met	Gln	Cys
	50				55						60				
Lys	Val	Tyr	Asp	Ser	Leu	Leu	Ala	Leu	Pro	Gln	Asp	Leu	Gln	Ala	Ala
65					70					75				80	
Arg	Ala	Leu	Val	Ile	Ile	Ser	Ile	Ile	Val	Ala	Ala	Leu	Gly	Val	Leu
			85						90					95	
Leu	Ser	Val	Val	Gly	Gly	Lys	Cys	Thr	Asn	Cys	Leu	Glu	Asp	Glu	Ser
		100						105					110		
Ala	Lys	Ala	Lys	Thr	Met	Ile	Val	Ala	Gly	Val	Val	Phe	Leu	Leu	Ala
		115					120					125			
Gly	Leu	Met	Val	Ile	Val	Pro	Val	Ser	Trp	Thr	Ala	His	Asn	Ile	Ile
	130						135				140				
Gln	Asp	Phe	Tyr	Asn	Pro	Leu	Val	Ala	Ser	Gly	Gln	Lys	Arg	Glu	Met
145					150					155				160	
Gly	Ala	Ser	Leu	Tyr	Val	Gly	Trp	Ala	Ala	Ser	Gly	Leu	Leu	Leu	Leu
			165						170					175	
Gly	Gly	Gly	Leu	Leu	Cys	Cys	Asn	Cys	Pro	Pro	Arg	Thr	Asp	Lys	Pro
			180					185					190		
Tyr	Ser	Ala	Lys	Tyr	Ser	Ala	Ala	Arg	Ser	Ala	Ala	Ala	Ser	Asn	Tyr
		195					200						205		

Val

<210> 5795

<211> 993

<212> DNA

<213> Homo sapiens

<400> 5795

ccacatacaa agaggaaaga tgaaactttt attgttacat ttattgacac tggatattta  
 60  
 ttatctgtta tataaccaggc aaaatggaca caccatcagg agataagacc tgtatcttac  
 120  
 gtgtaagatg aaacttatat ttattgattg aattattgaa tactttttga gtatttgcta  
 180  
 tataaccaggc aaaaggcaca gaacaaatta tttgttcaca gttactttta actctttcag  
 240  
 caatgcctga gtcctcttta tagaaacttc attttgctaa gttagcaacc attcattttt  
 300  
 ttggttactc ttcattgata gttttctcaa gtgtctcttc aaatactgca taatggata  
 360  
 gaccatttaa tattccaaac ataactctgaa agactagagg aatcgccatt aatttcattt  
 420  
 gtgtttgaca aagcgtcatc caatggatta aaacccttcc ttttggtggc agtggaacgg  
 480  
 tatgatactt ggttgccagg cgtccatttt tagtaaaagc caaagaactg ggatagaaaa  
 540  
 caccacaaac tatgccaatc agtgagcttc tgaaaacaca gttttccttg cttatattat  
 600  
 ctgaatacaa agcatcaatt acaaaaagct tgtcagtaac aacagtagac aaaaatggaa  
 660  
 gtgtagccaa tgatgcatat gtcttcaaag catcatgttt aaccttgaag cagcgtctga  
 720  
 acaggaagtt tgagaatatt ccagagaaac cagctgttgt tccaaatgtc gccatttgat  
 780  
 atatattttg tgcattttct tttctaagat agtcaaaatt tttttctatg atttctatga  
 840  
 ccattgggtct tctgagtttt gcatcttcta gagaaggact gggctgacca tgcatagatg  
 900  
 ctgccatctt gaaaaccttg ggcgttctc cagttccac cggcaccaca cctgaatccc  
 960  
 ttggcttagt cccagcctca taccgaaca cca  
 993

&lt;210&gt; 5796

&lt;211&gt; 200

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5796

Met	Ala	Ala	Ser	Met	His	Gly	Gln	Pro	Ser	Pro	Ser	Leu	Glu	Asp	Ala
1				5				10					15		
Lys	Leu	Arg	Arg	Pro	Met	Val	Ile	Glu	Ile	Ile	Glu	Lys	Asn	Phe	Asp
			20					25					30		
Tyr	Leu	Arg	Lys	Glu	Met	Thr	Gln	Asn	Ile	Tyr	Gln	Met	Ala	Thr	Phe
			35					40					45		
Gly	Thr	Thr	Ala	Gly	Phe	Ser	Gly	Ile	Phe	Ser	Asn	Phe	Leu	Phe	Arg
			50				55				60				
Arg	Cys	Phe	Lys	Val	Lys	His	Asp	Ala	Leu	Lys	Thr	Tyr	Ala	Ser	Leu
65				70						75				80	
Ala	Thr	Leu	Pro	Phe	Leu	Ser	Thr	Val	Val	Thr	Asp	Lys	Leu	Phe	Val
				85					90					95	
Ile	Asp	Ala	Leu	Tyr	Ser	Asp	Asn	Ile	Ser	Lys	Glu	Asn	Cys	Val	Phe

	100		105		110										
Arg	Ser	Ser	Leu	Ile	Gly	Ile	Val	Cys	Gly	Val	Phe	Tyr	Pro	Ser	Ser
	115						120					125			
Leu	Ala	Phe	Thr	Lys	Asn	Gly	Arg	Leu	Ala	Thr	Lys	Tyr	His	Thr	Val
	130						135					140			
Pro	Leu	Pro	Pro	Lys	Gly	Arg	Val	Leu	Ile	His	Trp	Met	Thr	Leu	Cys
145					150					155					160
Gln	Thr	Gln	Met	Lys	Leu	Met	Ala	Ile	Pro	Leu	Val	Phe	Gln	Ile	Met
			165						170					175	
Phe	Gly	Ile	Leu	Asn	Gly	Leu	Tyr	His	Tyr	Ala	Val	Phe	Glu	Glu	Thr
			180					185					190		
Leu	Glu	Lys	Thr	Ile	His	Glu	Glu								
	195						200								

&lt;210&gt; 5797

&lt;211&gt; 405

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5797

```

ctcagatcaa taccctgact ggccagtcga gggaactgct gagagcggct tgcgtgtgtc
60
gaggagcaga aagaggatgg ccctcactcc agctcctgca ctgccagcag cccacctgc
120
ttctctcctg ccagcagcca aaagcaggca actgccggac agtcctaacc caaggcgggt
180
agaagggagc agagaccagg cctggcccct tcagactttc tcacagagaa attacagatc
240
tctaagcctc tattgttggc tggcgaggga gggaagaaca tcaagttatc agggaaatca
300
aggatccctc cgccccgcc ctgaaccagc aggtccggaa gggagcaagc ggtcaggag
360
gccagtgcct tgcgggaacc ccagcctcat gaccaacctc ggccg
405

```

&lt;210&gt; 5798

&lt;211&gt; 109

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5798

Met	Ala	Leu	Thr	Pro	Ala	Pro	Ala	Leu	Pro	Ala	Ala	His	Pro	Ala	Ser
1				5				10						15	
Leu	Leu	Pro	Ala	Ala	Lys	Ser	Arg	Gln	Leu	Pro	Asp	Ser	Pro	Asn	Pro
			20					25						30	
Arg	Arg	Val	Glu	Gly	Ser	Arg	Asp	Gln	Ala	Trp	Pro	Leu	Gln	Thr	Phe
		35					40					45			
Ser	Gln	Arg	Asn	Tyr	Arg	Ser	Leu	Ser	Leu	Tyr	Cys	Trp	Leu	Ala	Arg
	50					55					60				
Glu	Gly	Arg	Thr	Ser	Ser	Tyr	Gln	Gly	Asn	Gln	Gly	Ser	Leu	Arg	Pro
65					70					75				80	
Arg	Pro	Glu	Pro	Arg	Gly	Pro	Glu	Gly	Ser	Lys	Arg	Ser	Gly	Arg	Pro
			85					90						95	
Val	Pro	Cys	Gly	Asn	Pro	Ser	Leu	Met	Thr	Asn	Leu	Gly			

100

105

&lt;210&gt; 5799

&lt;211&gt; 4261

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5799

agtgggtgga gaagccactc tcccgaacc agagggatgg ggccggtgt gcagtagaac  
60ggggatcgaa aagaggaaaa caagggcacg aagaccagcg agaaagaaga ggacacctgg  
120gaaaggcggga agcagaagac ggggaaggga aaagaaacc atagcagggtg gaaaccagat  
180ctagagcaac accgtcaggt tcacagtttg tttttctaga agagaagaaa gtacctgagg  
240attgctcttt tttcctaccg ttaataaaaa ctacttttgt cttcatcata aaagaaaaaa  
300ctaaggggag gtaaaggcag tctcctgttt tattaggggg agagggtgaag ggaaatccag  
360gtcactttc tgaataagcc actgcctggt gcacagagca gaaccatcct ggtttctgaa  
420gacacatccc tttcagcaga attccagccg gagtcgctgg cacagttcta tttttatatt  
480taaatgtatg tctcccctgg cttttttttt tttttttttt ttttttttagc aacacttttc  
540ttgtttgtaa acgcgagtga ccagaaagtg tgaatgcgga gtaggaatat ttttcgtgtt  
600ctcttttata tgcttgccct ttttagagag tagcagtgtt tcctatttcg gaaaaggacg  
660ttctaattca aagctctctc ccaatatatt tacacgaata cgcatttaga aaggagggca  
720gcttttgagg ttgcaatcct actgagaagg atggaagaag gagccaggca ccgaaacaac  
780accgaaaaga aacaccagcagg tgggggagag tcggacgcca gccccaggc tggttccgga  
840gggggaggag tagccctgaa gaaagagatc ggatttgtca gtgcctgtgg tatcatcgta  
900gggaacatca tcggctctgg aatctttgtc tcgccaaagg gagtgctgga gaatgctggt  
960tctgtgggcc ttgctctcat cgtctggatt gtgacgggct tcatcacagt tgtgggagcc  
1020ctctgctatg ctgaactcgg ggtcaccatc cccaaatctg gaggtgacta ctctatgtc  
1080aaggacatct tcggaggact ggctgggttc ctgaggctgt ggattgctgt gctggtgatc  
1140taccacacca accaggetgt catcgccctc accttctcca actacgtgct gcagccgctc  
1200ttccccacct gttccccccc agagtctggc cttcggctcc tggtgccat ctgcttattg  
1260ctctcacat ggtcaactg ttccagtgtg cgggtggcca cccgggttca agacatcttc  
1320acagctggga agctcctggc cttggccctg attatcatca tggggattgt acagatatgc  
1380

aaaggagagt acttctggct ggagccaaag aatgcatttg agaatttcca ggaacctgac  
1440  
atcggcctcg tcgcactggc ttctcttcag ggctcctttg cctatggagg ctggaacttt  
1500  
ctgaattaag tgactgagga gcttgttgat ccctacaaga accttcccag agccatcttc  
1560  
atctccatcc cactggtcac atttgtgat gtctttgcca atgtcgctta tgtcactgca  
1620  
atgtccccc aggagctgct ggcaccaac gccgtcgctg tgacttttgg agagaagctc  
1680  
ctaggagtca tggcctggat catgccatt tctgttgccc tgtccacatt tggaggagt  
1740  
aatgggtctc tcttcacctc ctctcggtg ttcttcgctg gagcccgaga gggccacctt  
1800  
cccagtgtgt tggccatgat ccacgtgaag cgctgcacc caatcccagc cctgctcttc  
1860  
acatgcatct ccacctgct gatgctggc accagcgaca tgtacacact catcaactac  
1920  
gtgggcttca tcaactacct cttctatggg gtcaagggtg ctggacagat agtctctcgc  
1980  
tggaagaagc ctgatatccc ccgcccac aagatcaacc tgctgttccc catcatctac  
2040  
ttgctgttct gggccttct gctggcttcc agcctgtggt cagagccggt ggtgtgtggc  
2100  
attggcctgg ccatcatgct gacaggagt cctgtctatt tcctgggtgt ttactggcaa  
2160  
cacaagccca agtgtttcag tgacttcatt gagctgctaa ccctggtgag ccagaagatg  
2220  
tgtgtggtcg tgtaccccg ggtggagcgg ggctcgggga cagaggaggc taatgaggac  
2280  
atggaggagc agcagcagc catgtaccaa cccactccca cgaaggacaa ggacgtggcg  
2340  
gggcagcccc agccctgagg accaccattc cctggctact ctctccttcc tcccccttt  
2400  
atctacctc cctgccttgg tcccgccaac acatgcgagt acacacacac cctctctct  
2460  
gcttttgcga ggcagtggta ggaacttgggt gtgggtgggt agaaattgta aacaaaaact  
2520  
gacattcata cccaaagaac cagcctctca cccagggtc catgtcccag gcccactcc  
2580  
agtgtgccc acactcccag ctgctggagg agaggggaga tgccaagggt cctgcagga  
2640  
cctccctcgc ggcacaccc tcagctgct cttcaggaa cggagctcat tactgccttc  
2700  
cctcccaggg aggcccttc agagaggaga ggccacagga gctgcattgt ggggggacag  
2760  
gtcaagcaa ttctgtcccc atcaaggggt cagctggaga gaccaagac cctatctgtt  
2820  
caccagggac caaaatcca aggggatgct tccctctgcc ctcttctctg cccctcccca  
2880  
tcatacctgc acccacccca gccagggtc cctgtccaga attcggttct cctcaggagc  
2940  
ccaactccca gagctaagga ccaaggagaa gaacagctc tccaccccca agccaggcg  
3000

ttgaggaaca tattgagaaa ggttcagatt gcagaaaccc agccctgccc ctgcctcctg  
 3060  
 catccagccc ccaacatggt gccaaagctt ccagaagcca aaaagcttct gatttttaag  
 3120  
 gtagtgggca tctctctcct aatgacgaag ctgctcagca actccacctg cccgccgcag  
 3180  
 gaaggagcag tccctgcta tcctgcagc cactcccagc acaccgcac acagccagca  
 3240  
 ccaccgcccc caccgtgcac ttctcctctc tgggccttgg cttgggacca ggtacgaagg  
 3300  
 atccccaagc ccttcaggcc tgagatcaga gccagatcag ccttaagtca cctcccatcc  
 3360  
 aagaacttgg cctaaaaata ctcccctatt tctaaccctc aggacggatc tgatattaaa  
 3420  
 tgccttcctt gggaggaagg gtgctttccc cctccctaga ggtgccatt ccataccctg  
 3480  
 ggagactgag gagagcattg gctgaagccc agttccttcc ccatccatcc ccaactccaa  
 3540  
 taatcccca ctctcgcag gtctcagtgt catgctgtct tggggcaggg tgaaagggta  
 3600  
 gtggcagcag ggcgcccact ctgggatcc tcaaaaaagg ccctcctctg ttgctggcag  
 3660  
 cctctgacct ttccctgggc ttcaaaggaa ggctatggag tttgctgtgg gcctgcaac  
 3720  
 ctccagcc actcctgctg cactaaggac ttaggatcct tttatcaca atcgggatcc  
 3780  
 tctccccac ccgaattct gtctgcttaa actggaatac acaggagccc ttcttgccct  
 3840  
 ggatggtgtc tccagcttc cccgcccagc ttgccacccc catagtgggt gagatgcaa  
 3900  
 gtttggtctg agttgtgacc ccttcagagt agatgcccg caggtgggg ttggccctg  
 3960  
 gagggtcagg ggaccatctt cttattccct cttttctcat tctccaact tctccctc  
 4020  
 cttaattat tttttgtaa agttgatgcc ttactttttg gataaatatt tttgaagctg  
 4080  
 gtatttctat ttcttttga ttttttttaa tgtaagggtg ttttggggga tggagttaga  
 4140  
 accttaatga taatttctt cgtttggtgt aggttttaga gatttgttt gtggagaggt  
 4200  
 tttttcttt tgatgtaata aaatttaaaa tggaaatgaa aaaaaaaaaa aaaaaaaaaa  
 4260  
 a  
 4261

&lt;210&gt; 5800

&lt;211&gt; 535

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5800

Met Glu Glu Gly Ala Arg His Arg Asn Asn Thr Glu Lys Lys His Pro

1

5

10

15

Gly Gly Gly Glu Ser Asp Ala Ser Pro Glu Ala Gly Ser Gly Gly Gly



	20		25		30
Gly Val Ala Leu Lys Lys Glu Ile Gly Leu Val Ser Ala Cys Gly Ile					
	35		40		45
Ile Val Gly Asn Ile Ile Gly Ser Gly Ile Phe Val Ser Pro Lys Gly					
	50		55		60
Val Leu Glu Asn Ala Gly Ser Val Gly Leu Ala Leu Ile Val Trp Ile					
65		70		75	80
Val Thr Gly Phe Ile Thr Val Val Gly Ala Leu Cys Tyr Ala Glu Leu					
	85		90		95
Gly Val Thr Ile Pro Lys Ser Gly Gly Asp Tyr Ser Tyr Val Lys Asp					
	100		105		110
Ile Phe Gly Gly Leu Ala Gly Phe Leu Arg Leu Trp Ile Ala Val Leu					
	115		120		125
Val Ile Tyr Pro Thr Asn Gln Ala Val Ile Ala Leu Thr Phe Ser Asn					
	130		135		140
Tyr Val Leu Gln Pro Leu Phe Pro Thr Cys Phe Pro Pro Glu Ser Gly					
145		150		155	160
Leu Arg Leu Leu Ala Ala Ile Cys Leu Leu Leu Leu Thr Trp Val Asn					
	165		170		175
Cys Ser Ser Val Arg Trp Ala Thr Arg Val Gln Asp Ile Phe Thr Ala					
	180		185		190
Gly Lys Leu Leu Ala Leu Ala Leu Ile Ile Ile Met Gly Ile Val Gln					
	195		200		205
Ile Cys Lys Gly Glu Tyr Phe Trp Leu Glu Pro Lys Asn Ala Phe Glu					
	210		215		220
Asn Phe Gln Glu Pro Asp Ile Gly Leu Val Ala Leu Ala Phe Leu Gln					
225		230		235	240
Gly Ser Phe Ala Tyr Gly Gly Trp Asn Phe Leu Asn Tyr Val Thr Glu					
	245		250		255
Glu Leu Val Asp Pro Tyr Lys Asn Leu Pro Arg Ala Ile Phe Ile Ser					
	260		265		270
Ile Pro Leu Val Thr Phe Val Tyr Val Phe Ala Asn Val Ala Tyr Val					
	275		280		285
Thr Ala Met Ser Pro Gln Glu Leu Leu Ala Ser Asn Ala Val Ala Val					
	290		295		300
Thr Phe Gly Glu Lys Leu Leu Gly Val Met Ala Trp Ile Met Pro Ile					
305		310		315	320
Ser Val Ala Leu Ser Thr Phe Gly Gly Val Asn Gly Ser Leu Phe Thr					
	325		330		335
Ser Ser Arg Leu Phe Phe Ala Gly Ala Arg Glu Gly His Leu Pro Ser					
	340		345		350
Val Leu Ala Met Ile His Val Lys Arg Cys Thr Pro Ile Pro Ala Leu					
	355		360		365
Leu Phe Thr Cys Ile Ser Thr Leu Leu Met Leu Val Thr Ser Asp Met					
	370		375		380
Tyr Thr Leu Ile Asn Tyr Val Gly Phe Ile Asn Tyr Leu Phe Tyr Gly					
385		390		395	400
Val Thr Val Ala Gly Gln Ile Val Leu Arg Trp Lys Lys Pro Asp Ile					
	405		410		415
Pro Arg Pro Ile Lys Ile Asn Leu Leu Phe Pro Ile Ile Tyr Leu Leu					
	420		425		430
Phe Trp Ala Phe Leu Leu Val Phe Ser Leu Trp Ser Glu Pro Val Val					
	435		440		445
Cys Gly Ile Gly Leu Ala Ile Met Leu Thr Gly Val Pro Val Tyr Phe					

450	455	460
Leu Gly Val Tyr Trp Gln His Lys Pro Lys Cys Phe Ser Asp Phe Ile		
465	470	475
Glu Leu Leu Thr Leu Val Ser Gln Lys Met Cys Val Val Val Tyr Pro		480
	485	490
Glu Val Glu Arg Gly Ser Gly Thr Glu Glu Ala Asn Glu Asp Met Glu		495
	500	505
Glu Gln Gln Gln Pro Met Tyr Gln Pro Thr Pro Thr Lys Asp Lys Asp		510
	515	520
Val Ala Gly Gln Pro Gln Pro		525
	530	535

&lt;210&gt; 5801

&lt;211&gt; 2418

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5801

```

nntccggaag tgctcagtca tgttcatagc aactcctaga gggcagagat ttcattctgct
60
ctgcccaccg ctatatagcc agccactaga acaggccgga agcgagaaa gagctaagat
120
cccacctcag acgacgtcat ggactcgttc ctggaaaagt tccagagcca gccttaccgt
180
ggcggctttc atgaggacca gtgggagaag gaatttgaaa aggtccccct atttatgtcg
240
agagcgccat cagaaattga tcccaggag aatcctgact tggcttgtct ccagtcaatt
300
atttttgatg aggagcgttc tccagaagaa caggccaaga cctataaaga tgagggcaat
360
gattacttta aagaaaaaga ctacaagaaa gctgtaattt catacactga aggcttaaag
420
aagaaatgtg cagatcctga tttgaatgct gtctttata ccaaccgggc agcagcacag
480
tactatctgg gcaattttcg ttctgtcttc aatgatgtga cagctgccag aaagctaaaa
540
ccctgccacc tcaaagcaat aataagaggt gccttatgcc atctggaact gaaacacttt
600
gccgaggccg tgaactggtg tgatgagga ctgcaaatag atgcaaaga gaagaagctt
660
ctggaaatga gggctaaagc agacaagctg aagcgaattg aacagaggga tgtgaggaaa
720
gccaacttga aagaaaagaa ggagaggaat cagaatgagg ctttactcca ggccatcaag
780
gctaggaata tcaggtcttc agaagctgcc tgtgaggatg aagattcagc ctcagaaggt
840
ctaggtgagc ttttctgga tggactcagc actgagaacc ccatggagc caggctgagt
900
ctagatggcc agggcaggct gagctggcct gtgctctttc tgtaccaga gtatgccag
960
tcggacttca tctctgcttt tcatgaggac tccaggttta ttgatcatct aatggtgatg
1020
tttggtgaaa caccctcttg ggacctagag caaaaatatt gcctgataat ttggaggtct
1080

```

actttgagga tgaggacagg gcagaactat accgggtgcc tgccaagagc accttgctac  
1140  
aggttctaca gcaccagagg tactttgtaa aagccctgac accagcattt ttggtctgtg  
1200  
taggatcctc tcctttttgc aagaattttc tccgggggag aaaggtgtac cagatacgat  
1260  
gactaagcca gggcccttgg atctcctccc ttaccctcct ctgctgggaa cctagcacac  
1320  
ctgaatcagc tggacatact gctggagtcc agtgctttct ttcctgcacc ctggggatag  
1380  
tccttctctg catcgtggtg ggggaggagc ctctggcttc cctaaactgc agcctctctg  
1440  
gctgtctctc actttcctca gttgatataa aactctgggt cttggccatg atgtccttgg  
1500  
actccatcgc taaagggacc atctgctgca gttaccacag caactgacct gagcggcacc  
1560  
ctggtctgtg gagatggact caggatccag tgacatgatt ctgaactttt gtggagtgtg  
1620  
acaccttaga gaagctaccc ctcaaactgc acatctacac acaaacaac aatgcatagg  
1680  
attccaaggc tttaaagctg agagaccctg gcctcaagtt atttcatgcg cacagagggg  
1740  
agccatgtgg ggttgctgaa gatgccttga ggtgaaatgg gggcaggaaa gccacatctt  
1800  
gctctgcatt tataaagacc gtacaaactg agatccttgg taccctaaa aagattgcca  
1860  
atttcttca tctttgccat atggaggact gtgacagact ttggacagtg gcctcttgag  
1920  
ttcctctgca gttttgacat ttaggatttt gtgtctttta aactggaaaa tcttctagca  
1980  
tgttgggttg ttacagagta tatttttgtc tgcagctgtt tgttgcccc ttcctaagag  
2040  
gagtttatcc atcctgactt gtagctgtgt gacttcttgc agtgccccca ccccatacc  
2100  
cccgggagag tgaacttccc tgctcccaat gcagagggat atgcacaggc atgagctgtc  
2160  
ctgcgtctga cagaagcctg aagagtcagt tgtggttggc ctgtgctctt cctctgctg  
2220  
tgagaacaca tttccacagc agggagccgtt ccatggagcc gagctacagc agctggcctg  
2280  
cagccactga gtgtcacagc aatgagagag caatgtttgc tgtagtaagc agtgagattt  
2340  
aggggttggg tgttactata gcagagctaa tacatgagta aactgaaaaa aaaaaaaaaa  
2400  
aaaaaaaaaa aaaaaaaaaa  
2418

&lt;210&gt; 5802

&lt;211&gt; 350

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5802

Asp Pro Thr Ser Asp Asp Val Met Asp Ser Phe Leu Glu Lys Phe Gln

1	5	10	15
Ser Gln Pro Tyr Arg Gly Gly Phe His Glu Asp Gln Trp Glu Lys Glu			
	20	25	30
Phe Glu Lys Val Pro Leu Phe Met Ser Arg Ala Pro Ser Glu Ile Asp			
	35	40	45
Pro Arg Glu Asn Pro Asp Leu Ala Cys Leu Gln Ser Ile Ile Phe Asp			
	50	55	60
Glu Glu Arg Ser Pro Glu Glu Gln Ala Lys Thr Tyr Lys Asp Glu Gly			
65	70	75	80
Asn Asp Tyr Phe Lys Glu Lys Asp Tyr Lys Lys Ala Val Ile Ser Tyr			
	85	90	95
Thr Glu Gly Leu Lys Lys Lys Cys Ala Asp Pro Asp Leu Asn Ala Val			
	100	105	110
Leu Tyr Thr Asn Arg Ala Ala Ala Gln Tyr Tyr Leu Gly Asn Phe Arg			
	115	120	125
Ser Ala Leu Asn Asp Val Thr Ala Ala Arg Lys Leu Lys Pro Cys His			
	130	135	140
Leu Lys Ala Ile Ile Arg Gly Ala Leu Cys His Leu Glu Leu Lys His			
145	150	155	160
Phe Ala Glu Ala Val Asn Trp Cys Asp Glu Gly Leu Gln Ile Asp Ala			
	165	170	175
Lys Glu Lys Lys Leu Leu Glu Met Arg Ala Lys Ala Asp Lys Leu Lys			
	180	185	190
Arg Ile Glu Gln Arg Asp Val Arg Lys Ala Asn Leu Lys Glu Lys Lys			
	195	200	205
Glu Arg Asn Gln Asn Glu Ala Leu Leu Gln Ala Ile Lys Ala Arg Asn			
	210	215	220
Ile Arg Leu Ser Glu Ala Ala Cys Glu Asp Glu Asp Ser Ala Ser Glu			
225	230	235	240
Gly Leu Gly Glu Leu Phe Leu Asp Gly Leu Ser Thr Glu Asn Pro His			
	245	250	255
Gly Ala Arg Leu Ser Leu Asp Gly Gln Gly Arg Leu Ser Trp Pro Val			
	260	265	270
Leu Phe Leu Tyr Pro Glu Tyr Ala Gln Ser Asp Phe Ile Ser Ala Phe			
	275	280	285
His Glu Asp Ser Arg Phe Ile Asp His Leu Met Val Met Phe Gly Glu			
	290	295	300
Thr Pro Ser Trp Asp Leu Glu Gln Lys Tyr Cys Leu Ile Ile Trp Arg			
305	310	315	320
Ser Thr Leu Arg Met Arg Thr Gly Gln Asn Tyr Thr Gly Cys Leu Pro			
	325	330	335
Arg Ala Pro Cys Tyr Arg Phe Tyr Ser Thr Arg Gly Thr Leu			
	340	345	350

&lt;210&gt; 5803

&lt;211&gt; 692

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5803

naccgctgaa ggggacgccg ggaacaggaa tttcttcaca tggctcctgg agaagtgacc

60

atcacagttc gcctcatccg ttcctttgaa catcgcaatt tcaaacctgt agtgtatcac

120

ggagtgaatt tggaccaaac tgtaaaggaa tttatcgtat ttctaaagca agatgtccct  
 180  
 ttaaggacca acctgccacc accattcaga aattataaat atgatgcact aaagattatt  
 240  
 catcaagcac ataaatcaaa gacaaatgaa cttgtgttga gtttgaaga tgacgaaaga  
 300  
 ctctgtctga aagaagacag cactctgaaa gcagctggaa tcgccagtga aactgaaatt  
 360  
 gcattcttct gtgaagaaga ttataggaac tacaaagcta atcccatttc atcctggtga  
 420  
 aaacatctcg agggcttctt ttttgcatac ctgtattaag ctctttattc cactgctgag  
 480  
 tttttgaaat tgacaaacaa atcttaaaaa attaatccca ggctatactc tttgagctaa  
 540  
 aatctgggta tttctttctc ttcaggtctt tctttccttc tctctttctt tttctttggt  
 600  
 gttgtaaaat aatatattat gagaaaaaca tttgatcttt ttaaaggga ataaattggt  
 660  
 attaaaaatt aaaaaaaaaa aaaaaaaaaa aa  
 692

&lt;210&gt; 5804

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5804

Met	Ala	Pro	Gly	Glu	Val	Thr	Ile	Thr	Val	Arg	Leu	Ile	Arg	Ser	Phe
1				5				10					15		
Glu	His	Arg	Asn	Phe	Lys	Pro	Val	Val	Tyr	His	Gly	Val	Asn	Leu	Asp
			20					25					30		
Gln	Thr	Val	Lys	Glu	Phe	Ile	Val	Phe	Leu	Lys	Gln	Asp	Val	Pro	Leu
		35					40					45			
Arg	Thr	Asn	Leu	Pro	Pro	Pro	Phe	Arg	Asn	Tyr	Lys	Tyr	Asp	Ala	Leu
		50				55					60				
Lys	Ile	Ile	His	Gln	Ala	His	Lys	Ser	Lys	Thr	Asn	Glu	Leu	Val	Leu
				70						75				80	
Ser	Leu	Glu	Asp	Asp	Glu	Arg	Leu	Leu	Leu	Lys	Glu	Asp	Ser	Thr	Leu
			85						90					95	
Lys	Ala	Ala	Gly	Ile	Ala	Ser	Glu	Thr	Glu	Ile	Ala	Phe	Phe	Cys	Glu
			100					105						110	
Glu	Asp	Tyr	Arg	Asn	Tyr	Lys	Ala	Asn	Pro	Ile	Ser	Ser	Trp		
			115				120						125		

&lt;210&gt; 5805

&lt;211&gt; 1112

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5805

nntccggagc tccccgtctt ccacctcccc ttctgtgggt tccaccacta tggagggcag  
 60  
 acggctccttc agtttgcagc agcgggtcaaa atctgacggg tctgggaaga tctggtagga  
 120

aaggccatcc ttgcgggggc tgaggccgat ctccctccatg ggctgagtgc tcagtggaga  
 180  
 gcgggggagtt gtgtccacct tgccgacgtc gctagccgtg gggctgtcct gggaaggcgg  
 240  
 acggcgagcg cccggtgtcc gcaactcgcc gcctgccgtg cccgtctgcg cccgtgtcat  
 300  
 cctcactcgg gacgcagggg ccgtttttaa atcacagggg cgtgtgtcag cctgccttag  
 360  
 gacttcatgt ctatatattt ccccatccac tgccccgact atctgagatc ggccaagatg  
 420  
 actgaggtga tgatgaacac ccagcccatg gaggagatcg gcctcagccc ccgcaaggat  
 480  
 ggcctttcct accagatcct cccagaccgc tcagattttg accgctgctg caaactgaag  
 540  
 gaccgtctgc cctccatagt ggtggaaccc acagaagggg aggtggagag cggggagctc  
 600  
 cggtggcccc ctgaggagtt cctggtccag gaggatgagc aagataactg cgaagagaca  
 660  
 gcgaaagaaa ataaagagca gtagagtccc tgtggactcc catgggtcat accagccagc  
 720  
 atctgttctt gaactgtgtt tttcccatca tgacggaaga agagagttag ccgcaattgt  
 780  
 tctgaaaatg tcaaacgagg cttctgtttt gcacctgcag atcaccgagt tggttttctt  
 840  
 ttcttttctt gccttttttt ttttttgaaa tttgccgagc agtggagccc tctgacaatt  
 900  
 tgcaaggccc tctgagaaaag gaagctgctt agagccaggg ggttagtggg tgaggggagc  
 960  
 gagtgtgtt tttgagatca ttatctgaac tcaggcagcc tagtagaggc agtgggtggg  
 1020  
 ttccaatggg tcttgggtgg tgggaggtgg ggcattgtgca aagcaagcaa ggaacatttg  
 1080  
 gggtaagaaa acaaacatga ggcaaaaaaa aa  
 1112

&lt;210&gt; 5806

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5806

Met	Ser	Ile	Tyr	Phe	Pro	Ile	His	Cys	Pro	Asp	Tyr	Leu	Arg	Ser	Ala
1				5					10					15	
Lys	Met	Thr	Glu	Val	Met	Met	Asn	Thr	Gln	Pro	Met	Glu	Glu	Ile	Gly
			20					25					30		
Leu	Ser	Pro	Arg	Lys	Asp	Gly	Leu	Ser	Tyr	Gln	Ile	Phe	Pro	Asp	Pro
		35				40					45				
Ser	Asp	Phe	Asp	Arg	Cys	Cys	Lys	Leu	Lys	Asp	Arg	Leu	Pro	Ser	Ile
	50					55				60					
Val	Val	Glu	Pro	Thr	Glu	Gly	Glu	Val	Glu	Ser	Gly	Glu	Leu	Arg	Trp
65					70				75					80	
Pro	Pro	Glu	Glu	Phe	Leu	Val	Gln	Glu	Asp	Glu	Gln	Asp	Asn	Cys	Glu
				85				90						95	
Glu	Thr	Ala	Lys	Glu	Asn	Lys	Glu	Gln							

100

105

<210> 5807  
<211> 1429  
<212> DNA  
<213> Homo sapiens

<400> 5807  
accctccat ttctcgccat ggccctgca ctgctcctga tccctgctgc cctcgctct  
60  
ttcatcctgg cctttggcac cggagtggag ttcgtgcgct ttacctccct tcggccactt  
120  
cttgaggga tcccggagtc tgggtggtccg gatgcccgcc agggatggct ggtgccttg  
180  
caggaccgca gcctccttgc cccctggca tgggatctgg ggtcctgct tctatttgtt  
240  
gggcagcaca gcctcatggc agctgaaaga gtgaaggcat ggacatcccgt tacttttggg  
300  
gtccttcaga ggtcactgta tgtggcctgc actgccttgg ccttgagct ggtgatgcgg  
360  
tactgggagc ccatacccaa aggcctgtg ttgtgggagg ctgggctga gccatgggccc  
420  
acctgggtgc cgctcctctg ctttgtgtc catgtcatct cctggctcct catcttttagc  
480  
atccttctcg tctttgacta tgctgagctc atgggctca aacagggtata ctaccatgtg  
540  
ctggggctgg ggcagcctct ggccctgaag tctccccggg ctctcagact cttctccac  
600  
ctgcgccacc cagtgtgtgt ggagctgctg acagtgtgtt ggggtgtgct taccctgggc  
660  
acggaccgtc tctccttgc tttctcctt acctctacc tgggcttggc tcacgggctt  
720  
gatcagcaag acctccgcta cctccgggccc cagctacaaa gaaaactcca cctgctctct  
780  
cggccccagg atggggaggc agagtgagga gctcactctg gttacaagcc ctgttcttcc  
840  
tctccactg aattctaaat ccttaacatc caggccctgg ctgcttcatg ccagaggccc  
900  
aatccatgg actgaaggag atgccccttc tactacttga gactttatc tctgggtcca  
960  
gtccataacc ctaaattctg agtttcagcc actgaactcc aaggctcact tctcaccagc  
1020  
aagggaagat ggggtatgga agtcatctgt cccttactg tttagagcat gacactctcc  
1080  
ccctcaacag cctcctgaga aggaaaggat ctgccctgac cactccctg gcactgttac  
1140  
ttgcctctgc gcctcagggg tcccctctg caccgtggc ttccactcca agaagggtga  
1200  
ccagggtctg caagttcaac ggtcatagct gtccctccag gcccacact tgctcacca  
1260  
ctcccggccc tagtctctgc acctcttag gcctgcctc tgggctcaga ccccaacct  
1320  
gtcaaggga ttctcctgct cttaactcga tgacttgggg ctccctgctc tcccaggaa  
1380

gatgctctgc aggaaaataa aagtcagcct ttttctacaa aaaaaaaaaa  
1429

<210> 5808

<211> 261

<212> PRT

<213> Homo sapiens

<400> 5808

Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe	Ile	Leu
1			5					10						15	
Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser	Leu	Arg	Pro
		20						25					30		
Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp	Ala	Arg	Gln	Gly
		35					40					45			
Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu	Ala	Pro	Leu	Ala	Trp
	50					55					60				
Asp	Leu	Gly	Leu	Leu	Leu	Leu	Phe	Val	Gly	Gln	His	Ser	Leu	Met	Ala
65					70					75				80	
Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser	Arg	Tyr	Phe	Gly	Val	Leu	Gln
			85						90				95		
Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr	Ala	Leu	Ala	Leu	Gln	Leu	Val	Met
		100						105					110		
Arg	Tyr	Trp	Glu	Pro	Ile	Pro	Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg
		115					120						125		
Ala	Glu	Pro	Trp	Ala	Thr	Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His
	130					135					140				
Val	Ile	Ser	Trp	Leu	Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr
145					150					155				160	
Ala	Glu	Leu	Met	Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu
			165						170					175	
Gly	Glu	Pro	Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser
		180						185					190		
His	Leu	Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val
		195					200						205		
Val	Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
	210					215					220				
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg	Tyr
225					230					235				240	
Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg	Pro	Gln
			245					250						255	
Asp	Gly	Glu	Ala	Glu											
			260												

<210> 5809

<211> 2009

<212> DNA

<213> Homo sapiens

<400> 5809

nttttttttt ttttttttaa gatggaatct cgctccatca cccaggctgg agggcaatgg  
60  
cgtgatctcg gctcactgca gctccacct cctgggttca agcaattctc ctgcctcagc  
120



ctcctgagta gttggcacta taagcatcca acaccatgac cggctaattt ttgtgttttt  
180  
ggtagaagcg gggtttcacc atgttgcca ggctggctc aaactcctga cctcaggtga  
240  
tccaccacc tgcctctccc aaagtgetgg tattacaggc gtgagccacc gagcccaacc  
300  
tgagtcacga ttctctcggg taacaggagg gccccccagg gaaagagggc gggcgggcgg  
360  
tctgcggaag ggcattgggt ctgaccaccg cacactctgg ccgccctccc gagtctccag  
420  
aactcctacg cctccttccc agcgggcaca ggcagcccg gctgaccctt ccccggaag  
480  
caggaggagc cctgcagaaa tcccaggagg gaagtggggg ctggaacggc ctccctgcct  
540  
ctacgtcag gcggggaagc ctagtgcag agtgccgtgc caggaggtcc gggccacgtc  
600  
ccctgcacct ccccgagct gctcccagga cgggcagagg ctctggctgt ccacacctc  
660  
tggtgaaacg ctggggactt gctggcgct gtgcgtgcac tgaccatgcc aaggccacg  
720  
tctgcacatc tgtgcacagc agagggaccg caccaggcca ggcactcacc tccgagtccc  
780  
ggccccagga atgtggatga agagaggctg ctgtgcgact cagtgaagtg ggtgcctcgt  
840  
ctgaaggtct aggggagatg ggggtgggat gagaggtgct ggggcttcac agggccccc  
900  
tccaccccg attacagctg gagaggcagg actcaaacc atgtcccca gtccaaacc  
960  
ctggaaggct gggcccttct ctcagcctca gtttccccc acccctcgcc cccaactctg  
1020  
gggacaggaa actcagggtc tcaggcctca cggggactcc taccggctg ggggtcaaag  
1080  
aggagctgct ctggctgcgg ctgcccagg agcctgagct gggccggctc tcaagacctg  
1140  
caggcaggac agagagagtt atgggtcacc ctcagcctg ccagctcta aaagcttcgg  
1200  
ttcatcatct caggggcaaa cctcagtgga cccggggggc ttgtggaacc ctctctaacc  
1260  
cagcctcacc cagcccgact catgaggaca ccagtcagca gctaaccacc agacacctg  
1320  
ggactcggag cacttacagg tcataaaact taaattaact ctccgctcg ctctctgctg  
1380  
gccaaactct acccaccac taaagccca gcttcatac cctccttggg caaagacctc  
1440  
actctcacgc cgagcctcct ccccatcagc cccaagtcct tccctctggc ccagccctga  
1500  
ctatgtggac tgggtctct gtgtcagatg cagactcttc tgacctgtg agaaaggctc  
1560  
atgacagcat gaggggtggt aagctaacc atgagctctg gggaggcca ggtctcct  
1620  
gtccccacct gccagtgtgg gaagtggggc cgcctttgc tgaagcagca gcagaggctc  
1680  
accatcggg caggaggctg gcagccctg aggggtggag cgaatctcat caccaggaa  
1740

caagcccagt gtggagacca gaagcctgcg tggggcagga gttcccggcg cagcaagggg  
 1800  
 cgggacgagg accttggtcc cggggcgggg cgggcggggc ccttatctct cagaacactc  
 1860  
 acaggcaacg cccaggactc cagaatcttc tgccctgggc agggagggcc tgcttgatc  
 1920  
 cttccccctt ccatcgggg ccacagagca caccgtgga gaagcaggag cgggccctgg  
 1980  
 gcctcctcag cttggccacg gagttgctg  
 2009

<210> 5810

<211> 52

<212> PRT

<213> Homo sapiens

<400> 5810

Xaa	Phe	Phe	Phe	Phe	Phe	Lys	Met	Glu	Ser	Arg	Ser	Ile	Thr	Gln	Ala
1				5						10				15	
Gly	Gly	Gln	Trp	Arg	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gly
			20					25					30		
Phe	Lys	Gln	Phe	Ser	Cys	Leu	Ser	Leu	Leu	Ser	Ser	Trp	His	Tyr	Lys
		35					40					45			
His	Pro	Thr	Pro												
		50													

<210> 5811

<211> 1607

<212> DNA

<213> Homo sapiens

<400> 5811

gttagcaaga aagtgatgtg ttccgggtag gggaattctg ttttggtatt attttgtctt  
 60  
 tcctgagaaa agcatcacia aaagagatgt ttgccatcc tgtttgctgg ggtagtggga  
 120  
 agagaccggg ggtgatggtg gtgctggctg gacgtgggtg gtttcacagg acctgctgtg  
 180  
 tctgagagga gccatgcggt gattagaagc ttggaggctg cagatctgcc gacaccccag  
 240  
 gccatcgagc cccaggccat cgtgcagcag gtcccagccc ccagtcgaat gcagatgccg  
 300  
 caggggaacc cgctgctgct gtcccacacc ctgcaggagc tgctggccag ggacaccgtg  
 360  
 caggtggagc tcattccgga gaagaaggc ctcttcctga agcatgtgga gtatgaggtt  
 420  
 tccagccagc gttcaagtc ctcggtatac agacggtaca atgacttcgt ggtcttcag  
 480  
 gagatgctcc tgcacaagtt cccctaccgt atggtgcctg cctgccacc caagagaatg  
 540  
 ctgggagctg acaggaggtt catcgaggcc aggaggagag ccctgaagcg cttcgtcaac  
 600  
 ctggtggcgc gacacccctt gttctccgag gatgtggtcc tcaagctctt cctgtccttc  
 660

agcggctcgg atgtgcagaa caagttaaag gagtcagcac agtgcgtcgg ggacgaattc  
 720  
 ctgaactgta agctggctac cagggccaag gacttcctcc cagctgacat ccaggctcag  
 780  
 ttgccaatca gccgggagct gatccggaac atctacaata gctttcacia gcttcgcgac  
 840  
 agggccgagc ggatcgctc gccggccatc gacaatgcgg cagatcttct catattcggg  
 900  
 aaggagctaa gtgcaatagg gtctgacacg accccgctgc cctcctgggc cgctctgaat  
 960  
 agcagcacgt gggggctcct gaagcaggct ctgaaaggcc tgtctgtgga attcgcgtg  
 1020  
 ctgcgccgaca aggtgcaca acagggttaag caggaagaga acgacgtggt ggagaagctg  
 1080  
 aacctcttct tggatctgct gcagtcctat aaggacctgt gcgagcggca tgagaagggc  
 1140  
 gtgttgaca agcaccagcg ggccctgcac aagtacagcc tgatgaagag gcagatgatg  
 1200  
 agcgccaccg cgcagaaccg cgagccggag tccgtggagc agctggagtc ccgcatcgtg  
 1260  
 gaggaggaga acgcgattca gacgatggag ctgcggaact acttctccct gtactgcctg  
 1320  
 caccaggaga cgcagctcat ccacgtctac ctgcccctca cctcccacat cctccgcgcc  
 1380  
 ttctcaact ctcagatcca agggcacaag gagatgagca aggtgtggaa cgacctgagg  
 1440  
 cccaagctca gctgcctctt tgcgggacca cacagcacc tgacccacc gtgctccccg  
 1500  
 ccggaggagc gcctgtgtcc tcaactagcg ctgaggctga ggtggtgctc cctgcggccg  
 1560  
 caagcttatt cccttagtg agggttaatt ttagcttgca ctggccg  
 1607

&lt;210&gt; 5812

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5812

Trp	Trp	Cys	Trp	Leu	Asp	Val	Gly	Gly	Phe	Thr	Gly	Pro	Ala	Val	Ser
1				5					10					15	
Glu	Arg	Ser	His	Ala	Val	Ile	Arg	Ser	Leu	Glu	Ala	Ala	Asp	Leu	Pro
			20						25				30		
Thr	Pro	Gln	Ala	Ile	Glu	Pro	Gln	Ala	Ile	Val	Gln	Gln	Val	Pro	Ala
			35						40				45		
Pro	Ser	Arg	Met	Gln	Met	Pro	Gln	Gly	Asn	Pro	Leu	Leu	Leu	Ser	His
			50						55				60		
Thr	Leu	Gln	Glu	Leu	Leu	Ala	Arg	Asp	Thr	Val	Gln	Val	Glu	Leu	Ile
			65						70				75		80
Pro	Glu	Lys	Lys	Gly	Leu	Phe	Leu	Lys	His	Val	Glu	Tyr	Glu	Val	Ser
			85						90				95		
Ser	Gln	Arg	Phe	Lys	Ser	Ser	Val	Tyr	Arg	Arg	Tyr	Asn	Asp	Phe	Val
			100						105				110		
Val	Phe	Gln	Glu	Met	Leu	Leu	His	Lys	Phe	Pro	Tyr	Arg	Met	Val	Pro

115	120	125
Ala Leu Pro Pro Lys Arg Met	Leu Gly Ala Asp Arg Glu Phe Ile Glu	
130	135	140
Ala Arg Arg Arg Ala Leu Lys Arg	Phe Val Asn Leu Val Ala Arg His	
145	150	155
Pro Leu Phe Ser Glu Asp Val Val	Leu Lys Leu Phe Leu Ser Phe Ser	
165	170	175
Gly Ser Asp Val Gln Asn Lys Leu	Lys Glu Ser Ala Gln Cys Val Gly	
180	185	190
Asp Glu Phe Leu Asn Cys Lys Leu	Ala Thr Arg Ala Lys Asp Phe Leu	
195	200	205
Pro Ala Asp Ile Gln Ala Gln Phe	Ala Ile Ser Arg Glu Leu Ile Arg	
210	215	220
Asn Ile Tyr Asn Ser Phe His Lys	Leu Arg Asp Arg Ala Glu Arg Ile	
225	230	235
Ala Ser Arg Ala Ile Asp Asn Ala	Ala Asp Leu Leu Ile Phe Gly Lys	
245	250	255
Glu Leu Ser Ala Ile Gly Ser Asp	Thr Thr Pro Leu Pro Ser Trp Ala	
260	265	270
Ala Leu Asn Ser Ser Thr Trp Gly	Ser Leu Lys Gln Ala Leu Lys Gly	
275	280	285
Leu Ser Val Glu Phe Ala Leu Leu	Ala Asp Lys Ala Ala Gln Gln Gly	
290	295	300
Lys Gln Glu Glu Asn Asp Val Val	Glu Lys Leu Asn Leu Phe Leu Asp	
305	310	315
Leu Leu Gln Ser Tyr Lys Asp Leu	Cys Glu Arg His Glu Lys Gly Val	
325	330	335
Leu His Lys His Gln Arg Ala Leu	His Lys Tyr Ser Leu Met Lys Arg	
340	345	350
Gln Met Met Ser Ala Thr Ala Gln	Asn Arg Glu Pro Glu Ser Val Glu	
355	360	365
Gln Leu Glu Ser Arg Ile Val Glu	Gln Glu Asn Ala Ile Gln Thr Met	
370	375	380
Glu Leu Arg Asn Tyr Phe Ser Leu	Tyr Cys Leu His Gln Glu Thr Gln	
385	390	395
Leu Ile His Val Tyr Leu Pro Leu	Thr Ser His Ile Leu Arg Ala Phe	
405	410	415
Val Asn Ser Gln Ile Gln Gly His	Lys Glu Met Ser Lys Val Trp Asn	
420	425	430
Asp Leu Arg Pro Lys Leu Ser Cys	Leu Phe Ala Gly Pro His Ser Thr	
435	440	445
Leu Thr Pro Pro Cys Ser Pro Pro	Glu Asp Gly Leu Cys Pro His	
450	455	460

&lt;210&gt; 5813

&lt;211&gt; 2991

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5813

nttgatgtat gtaattgatc actttatttaa ctggcaaaaa gaagccttgt tgagggtgata  
60

aaccgaactt cattacatcc tgtatgtoga gagcaaacac attgggacgt ggctgatggg  
120

ttccatttc aaggctgatt ctgatgatga taatgtttta gtagcattga ttgttctcta  
180  
attgaatttt tctttcttta ggcctcttct gaagagctga aagctgcta ccggaggctc  
240  
tgtatgctct accatccaga caagcacaga gaccagagc tcaagtcaca ggcggaacga  
300  
ctgtttaacc ttgttcacca ggcttatgaa gtgcttagtg acccccaaac cagggccatc  
360  
tatgatatat atgggaagag aggactggaa atggaaggat gggagggtgt ggaaaggag  
420  
agaaccctg ctgaaattcg agaggagttt gaggcgctgc agagagagag agaagagagg  
480  
agattgcagc agcgaaccaa tccaagctt tgtgacaaca aactgtgctc tgcagtttct  
540  
atcccggtga atccgacctg gctgaccac tgcctagct cggaacctag acaagaacac  
600  
cgtgggtac ctgcagtggc gatgggtat ccagtcagcc atgaacacta gcacgtccg  
660  
agacactaaa accagccact tcaactgtgc cctgcagctg ggaatccctc actcctttgc  
720  
actgatcagc tatcagcaca aattccaaga tgacgatcag actcgtgtga aaggatccct  
780  
gcagagcagg cttctttggg acggtggtgg agtacggagc tgagaggaag atctccaggc  
840  
acagcgtttt ggggtcagct gtcagcgttg gagttccaca gggcgtttct ctcaaagtca  
900  
agctcaacag ggccagtcag acatacttct tccctattca cttgacggac cagcttctgc  
960  
ccagcgccat gttctatgcc accgtggggc ctctagtgtt ctactttgcc atgcaccgtc  
1020  
tgatcatcaa accatacctc agggctcaga aagagaagga attggagaag cagagggaaa  
1080  
gcgcgccac cgatgtgctg cagaagaagc aagaggcgga gtccgctgtc cggctgatgc  
1140  
aggaaatctgt ccgaaggata attgaggcag aagagtcag aatgggctc atcatcgta  
1200  
atgcctggta cgggaagttt gtcaatgaca agagcaggaa gagcgagaag gtgaaggta  
1260  
ttgacgtgac tgtgcccctg cagtgcctgg tgaaggactc gaagctcatc ctcacggagg  
1320  
cctccaaggc tgggtgcct ggcttttatg acccgtgtgt gggggaagag aagaacctga  
1380  
aagtgtctta tcagttccgg ggcgtctgc atcaggtgat ggtgctggac agtgaggccc  
1440  
tccgatacc aaagcagtc cacaggatcg atacagatgg ataaactgcc aagaaccaga  
1500  
tttttaaaag gccgcaaaaa atcttttctt gggagtctac aaatttgaa atgaaaaaac  
1560  
ccagacatca gatgttttta ttttatatta ttattataga aggtggtacc attatcaatt  
1620  
atgtgaaggg acatgcagac acccagctt ttgaggggtc tgggggtagg actgaggcag  
1680  
ccccactggg aaccagactg cagcctggcc catggctgtt tccaagga tcagttctg  
1740

gagggaaggg ctctggccct gactccgctg tgtcccgagc acacgtgctg accgcagccc  
 1800  
 gccgccctgt agttcttggc tgggtctgga ggtgtctgtg gagcaccctg cctcaccac  
 1860  
 aggagcgtga gccatttctg cagtccacgc tgaacatggg aaacaacctg aaaagcaggc  
 1920  
 aggcctcccg gtcaggagc ctctgctgtg ctggcttccc atgaccacct cctcttgctg  
 1980  
 aaatattact gcttgaatct ggagcagatt gcgggtttat aaaactgctt tttatctgag  
 2040  
 aacaaacggg tttggaaatt agtcgtcttt tttccctact cccagagctg ctcaagtc  
 2100  
 tccaccggcc cctcggctt gggacagggt agtgtaactc ccgatcccag ggcttagccc  
 2160  
 tgacacaggt ggcttcccg atcccggtgg gaaaacgccc tgcaccagc gggcttgagc  
 2220  
 tggcctgtgt cctccaccg cctgcaccac ccacctccag agtgcaagtgc tgggcaaggg  
 2280  
 cagctcaaga ggacaggacc aggcgcttgg caagacatca gacacacca acccaaaggc  
 2340  
 gtggaccca ggcggggccc gtggtacca gcagggtggca ctgcagctcc ccgctcctgc  
 2400  
 aggtccagcg tctcacagg aacaccagg cctgtgctcc ggagccttcc ttcagacct  
 2460  
 tctccacgt gccacttgg gatgcagaat gcagcggagc taggacccc tccacggcct  
 2520  
 ggacctcggc tgcagtaaag ttacgtgagg cctgtctctc ggggcctgga agtggcagcc  
 2580  
 atcagttgct cttgctgacc cctcggagca agcgcgcac aggtggtggc tgagacagct  
 2640  
 ggcgcggggg gcccgaagct gcgcggcct ccagcccacc cacagctgtt gctgaagtca  
 2700  
 ggctccctc cccagcactg gtatctgagt aacggctaag aacctcttc ctctggtttt  
 2760  
 gaaaagcagt tcgggttgc caattctgta acattcatct ccatttttta aaaaggtttc  
 2820  
 tctgacggcc ccacggcccg agccgcggtg agcgtcgtgt tgcattgagc tgggccccgg  
 2880  
 gcttcccgct cgcctctgcc gcagggtgct ctgggcaccc atcctctgcy tttcatttgc  
 2940  
 agtcgactgt acagaaggca ctcaccacaa taaaccttcc ctgaaagcag a  
 2991

&lt;210&gt; 5814

&lt;211&gt; 149

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5814

Ala	Ser	Ser	Glu	Leu	Lys	Ala	Ala	Tyr	Arg	Arg	Leu	Cys	Met	Leu
1			5					10				15		
Tyr	His	Pro	Asp	Lys	His	Arg	Asp	Pro	Glu	Leu	Lys	Ser	Gln	Ala
			20					25				30		
Arg	Leu	Phe	Asn	Leu	Val	His	Gln	Ala	Tyr	Glu	Val	Leu	Ser	Asp
														Pro

35 40 45  
 Gln Thr Arg Ala Ile Tyr Asp Ile Tyr Gly Lys Arg Gly Leu Glu Met  
 50 55 60  
 Glu Gly Trp Glu Val Val Glu Arg Arg Arg Thr Pro Ala Glu Ile Arg  
 65 70 75 80  
 Glu Glu Phe Glu Arg Leu Gln Arg Glu Arg Glu Glu Arg Arg Leu Gln  
 85 90 95  
 Gln Arg Thr Asn Pro Lys Leu Cys Asp Asn Lys Leu Cys Ser Ala Val  
 100 105 110  
 Phe Ile Pro Trp Asn Pro Thr Arg Pro Asp His Cys Pro Ser Ser Glu  
 115 120 125  
 Pro Arg Gln Glu His Arg Gly Leu Pro Ala Val Ala Met Gly Tyr Pro  
 130 135 140  
 Val Ser His Glu His  
 145

&lt;210&gt; 5815

&lt;211&gt; 590

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5815

ttcattccagg ctgctcttgg ggatcagcca cgtgatatcc tttgtggggc agctgatgaa  
 60  
 gttctagctg ttctaaagaa tgaaaagctg cgggacaagg aaaggcgaaa ggagattgac  
 120  
 ctgctgctgg gtcaaacaga tgataccaga taccatgtgc tagtgaacct gggcctcccg  
 180  
 agtctcttta gttttgggct tgtagatgat gcccaccatc tcatcaatgc cctccgacag  
 240  
 cagagtataa cccttcatct tgttgatgtc atgccgggtc tcatcacgct ttcttcgctt  
 300  
 ggctcttctt tctctctgca tctgcgggtt ggtccgttga gccttgtctc ccatacgggt  
 360  
 gccctccagc ttccaacaa gggacagcac ctctcctgtg ggttcatccc ggcgggtccg  
 420  
 gtcaatgaga gaacggtcag cttggagcac aagattcgag ttgccttgt actcgtattg  
 480  
 cagactacgg gcggttacat ccgccatggc cgcggctgct cggaggcttc agaccaccac  
 540  
 gcctccatac cgcaagctgc aaacggccgc agatctctgc tctggcgcc  
 590

&lt;210&gt; 5816

&lt;211&gt; 196

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5816

Phe Ile Gln Ala Ala Leu Gly Asp Gln Pro Arg Asp Ile Leu Cys Gly  
 1 5 10 15  
 Ala Ala Asp Glu Val Leu Ala Val Leu Lys Asn Glu Lys Leu Arg Asp  
 20 25 30  
 Lys Glu Arg Arg Lys Glu Ile Asp Leu Leu Leu Gly Gln Thr Asp Asp

35 40 45  
 Thr Arg Tyr His Val Leu Val Asn Leu Gly Leu Pro Ser Leu Phe Ser  
 50 55 60  
 Phe Gly Leu Val Asp Asp Ala His His Leu Ile Asn Ala Leu Arg Gln  
 65 70 75 80  
 Gln Ser Ile Thr Leu His Leu Val Asp Val Met Pro Val Leu Ile Thr  
 85 90 95  
 Leu Ser Ser Leu Gly Ser Ser Phe Leu Leu His Leu Arg Phe Gly Pro  
 100 105 110  
 Leu Ser Leu Val Ser His Thr Gly Ala Leu Gln Leu Pro Asn Lys Gly  
 115 120 125  
 Gln His Leu Ser Cys Gly Phe Ile Pro Ala Gly Pro Val Asn Glu Arg  
 130 135 140  
 Thr Val Ser Leu Glu His Lys Ile Arg Val Arg Leu Val Leu Val Leu  
 145 150 155 160  
 Gln Thr Thr Gly Gly Tyr Ile Arg His Gly Arg Gly Cys Ser Glu Ala  
 165 170 175  
 Ser Asp His His Ala Ser Ile Pro Gln Ala Ala Asn Gly Arg Arg Ser  
 180 185 190  
 Leu Leu Leu Ala  
 195

&lt;210&gt; 5817

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5817

cccaaagatg cagaactaca aagcaagccc caagatggag tgagcaacaa caatgaaatt  
 60  
 cagaagaaag ccaccatggg gcagttacag aacaaggaga acaataacac caaggacagc  
 120  
 cctagtaggc agtgctctctg ggacaagtct gagtcacccc agagaagcag catgaacaat  
 180  
 ggatccccca cagctctatc aggcagcaaa accaacagcc caaagaacag tgttcacaag  
 240  
 ctagatgtgt ctagaagccc ccctctcatg gtcaaaaaga acccagcctt taataagggt  
 300  
 agtgggatag ttaccaatgg gtccttcagc agcagtaatg cagaagggtct tgagaaaacc  
 360  
 caaaccaccc ccaatgggag cctacaggcc agaaggagct cttcactgaa ggtatctggt  
 420  
 accaaaatgg gcacgcacag tgtacagaat ggaacggtgc gcatgggcat tttgaacagc  
 480  
 gacacactcg ggaacccccc aaatgttcga aacatgagct ggctgccaaa tggctatgtg  
 540  
 accctgaggg ataacaagca gaaagaacaa gctggagagt taggccagca caacagactg  
 600  
 tcacctatga taatgtccat cacagttctc catgatgaac ttgatgac  
 648

&lt;210&gt; 5818

&lt;211&gt; 191

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 5818

Met Gly Gln Leu Gln Asn Lys Glu Asn Asn Asn Thr Lys Asp Ser Pro  
 1 5 10 15  
 Ser Arg Gln Cys Ser Trp Asp Lys Ser Glu Ser Pro Gln Arg Ser Ser  
 20 25 30  
 Met Asn Asn Gly Ser Pro Thr Ala Leu Ser Gly Ser Lys Thr Asn Ser  
 35 40 45  
 Pro Lys Asn Ser Val His Lys Leu Asp Val Ser Arg Ser Pro Pro Leu  
 50 55 60  
 Met Val Lys Lys Asn Pro Ala Phe Asn Lys Gly Ser Gly Ile Val Thr  
 65 70 75 80  
 Asn Gly Ser Phe Ser Ser Ser Asn Ala Glu Gly Leu Glu Lys Thr Gln  
 85 90 95  
 Thr Thr Pro Asn Gly Ser Leu Gln Ala Arg Arg Ser Ser Ser Leu Lys  
 100 105 110  
 Val Ser Gly Thr Lys Met Gly Thr His Ser Val Gln Asn Gly Thr Val  
 115 120 125  
 Arg Met Gly Ile Leu Asn Ser Asp Thr Leu Gly Asn Pro Thr Asn Val  
 130 135 140  
 Arg Asn Met Ser Trp Leu Pro Asn Gly Tyr Val Thr Leu Arg Asp Asn  
 145 150 155 160  
 Lys Gln Lys Glu Gln Ala Gly Glu Leu Gly Gln His Asn Arg Leu Ser  
 165 170 175  
 Pro Met Ile Met Ser Ile Thr Val Leu His Asp Glu Leu Asp Asp  
 180 185 190

&lt;210&gt; 5819

&lt;211&gt; 1652

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5819

gatattcttt tggaaacgta atattggcct tggggctctc cagccctttg ggacttccaa  
 60  
 tgggatctta gaagcagccg aagcagcgtg agggcgccg agggccagcc acgatttgaa  
 120  
 cgctctgctt tgcagctctt ctggaccgag gageccaaag ccctaccctc accattcacc  
 180  
 aggtcctgtg ggaagagcag cgtggaggtg ggctgaggtt agaaggtgca gacggtggaa  
 240  
 gaagattgtg agctgagtat tggacatctg ttcttgaata gtcctgggc ctgccatagg  
 300  
 aaaggaagtt ctccagggtt acagttctta tccgcgtgaa tacacatggc tctgttacga  
 360  
 aaaattaatc aggtgctgct gtctcttctg atcgtgaccc tctgtgtgat tctgtataag  
 420  
 aaagttcata aggggactgt gcccaagaat gacgcagatg atgaatccga gactcctgaa  
 480  
 gaactggaag aagagattcc tgtggtgatt tgtgctgcag caggaggat gggtgccact  
 540  
 atggctgcca tcaatagcat ctacagcaac cctgacgcca acatcttggt ctatgtagtg  
 600

ggactccgga atactctgac tcgaatacga aaatggattg aacattccaa actgagagaa  
 660  
 ataaacttta aaatcgtgga attcaaccg atggctctca aagggaagat cagaccagac  
 720  
 tcactgaggc ctgaattgct ccagcctctg aactttgttc gattttatct ccctctactt  
 780  
 atccaccaac acgagaaagt catctatttg gacgatgatg taattgtaca aggtgatata  
 840  
 caagaactgt atgacaccac cttggccctg ggccacgagg cggtttcttc agatgactgc  
 900  
 gatttgccct ctgctcagga cataaacaga ctcgtgggac ttcagaacac atatatgggc  
 960  
 tatctggact accggaagaa ggccatcaag gaccttgga tcagccccag cacctgctct  
 1020  
 ttcaatcctg gtgtgattgt tgccaacatg acagaatgga agcaccagcg catcaccaag  
 1080  
 caattggaga aatggatgca aaagaatgtg gactacgtga aggcttctct accatttttt  
 1140  
 ccattgcttg aaacaaaatc attcaattaa tttccacac atagttcaag ggtagaaat  
 1200  
 atttcacagt catctcaggt cagattttct tacagaggca atgttaagaa agaaaagggg  
 1260  
 gcagtcaatt aaaacctttc ctcaaaagat ataaatcaga ggaatcaaga tcctgtggag  
 1320  
 cgaggagtcc ctgattatac attttcctag taagctgttg aaaaatgtga cttgaatctt  
 1380  
 ttccaccaa caatcttcat ttatcttagt tgagtttccc ctctaacat agattttttt  
 1440  
 attaaggatt attatataaa gtcaattttg ctttttaagg tttattttta taatttataa  
 1500  
 tttttcgta tcggagtttt aaaatagaga agataaaaat aagtctaata caagcactat  
 1560  
 tatcccatca ttgtattgcc tagcagctct gtgtatctgg atattttaat accatcataa  
 1620  
 ccttgaattt gcaagtaaag ttattctaaa ta  
 1652

&lt;210&gt; 5820

&lt;211&gt; 274

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5820

Met	Ala	Leu	Leu	Arg	Lys	Ile	Asn	Gln	Val	Leu	Leu	Phe	Leu	Leu	Ile
1				5				10					15		
Val	Thr	Leu	Cys	Val	Ile	Leu	Tyr	Lys	Lys	Val	His	Lys	Gly	Thr	Val
			20					25					30		
Pro	Lys	Asn	Asp	Ala	Asp	Asp	Glu	Ser	Glu	Thr	Pro	Glu	Glu	Leu	Glu
			35				40					45			
Glu	Glu	Ile	Pro	Val	Val	Ile	Cys	Ala	Ala	Ala	Gly	Arg	Met	Gly	Ala
		50				55					60				
Thr	Met	Ala	Ala	Ile	Asn	Ser	Ile	Tyr	Ser	Asn	Pro	Asp	Ala	Asn	Ile
65				70				75					80		
Leu	Phe	Tyr	Val	Val	Gly	Leu	Arg	Asn	Thr	Leu	Thr	Arg	Ile	Arg	Lys

	85		90		95										
Trp	Ile	Glu	His	Ser	Lys	Leu	Arg	Glu	Ile	Asn	Phe	Lys	Ile	Val	Glu
	100							105					110		
Phe	Asn	Pro	Met	Val	Leu	Lys	Gly	Lys	Ile	Arg	Pro	Asp	Ser	Ser	Arg
	115						120					125			
Pro	Glu	Leu	Leu	Gln	Pro	Leu	Asn	Phe	Val	Arg	Phe	Tyr	Leu	Pro	Leu
	130					135					140				
Leu	Ile	His	Gln	His	Glu	Lys	Val	Ile	Tyr	Leu	Asp	Asp	Asp	Val	Ile
145					150					155				160	
Val	Gln	Gly	Asp	Ile	Gln	Glu	Leu	Tyr	Asp	Thr	Thr	Leu	Ala	Leu	Gly
			165						170					175	
His	Ala	Ala	Ala	Phe	Ser	Asp	Asp	Cys	Asp	Leu	Pro	Ser	Ala	Gln	Asp
	180							185					190		
Ile	Asn	Arg	Leu	Val	Gly	Leu	Gln	Asn	Thr	Tyr	Met	Gly	Tyr	Leu	Asp
	195						200					205			
Tyr	Arg	Lys	Lys	Ala	Ile	Lys	Asp	Leu	Gly	Ile	Ser	Pro	Ser	Thr	Cys
	210					215					220				
Ser	Phe	Asn	Pro	Gly	Val	Ile	Val	Ala	Asn	Met	Thr	Glu	Trp	Lys	His
225					230				235					240	
Gln	Arg	Ile	Thr	Lys	Gln	Leu	Glu	Lys	Trp	Met	Gln	Lys	Asn	Val	Glu
			245						250					255	
Tyr	Val	Lys	Ala	Ser	Leu	Pro	Phe	Phe	Pro	Cys	Leu	Glu	Thr	Lys	Ser
			260					265						270	
Phe	Asn														

&lt;210&gt; 5821

&lt;211&gt; 3292

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5821

ngcctgtaac cccaacactt tgggaggcca cgccaggagg atcacttgag gccaggagt  
60

cgagaccagc ctggtcaaca tagcgagact tegtactag aaaaaattta aaaaattttt  
120

taaaaaggaa aaaatataac ttagagcccc ctatgaaaaa ctaaattagc atcatgacag  
180

gatacacttt ggggagttaa atttcacagt acctttattt aattccaagc catagagcct  
240

ggtaatatTT ttctctttat cagctgtggc actaaaataa cagtggattt tttccctcta  
300

gacattcttc ttttgccga tgaaaaattt gacttcgac tttcattgtc ttttcgagt  
360

gcaaatgaag atgatgaagt cttcttcgga ccctttggac ataaagaaag atgtattgtc  
420

gccagcttgg aattaaataa tccggttccc gaacagcctc cgttgccac atctgagagt  
480

ccctttgcct ggagccctct ggccggggag aagttcgtgg aggtgtacaa agaagctcac  
540

ttactggctt tacacattga gacgagcagc cggaaccagg cagcccaagc tgccaagcct  
600

gaagaccctc ggagccaggg cgtggaaaga ttcatacagg agtcaaaatt aaaaataaac  
660

ctctttgaga aagaaaagga aatgaagaaa agccccacgt ctcttaaaag ggagacatac  
720  
tacctgtcag acagcccctt gctggggccc cctgtgggtg agcctcggtt cttggcctcc  
780  
tccccggccc tgcccagctc tgggtgcccag gcccgccca cccgggcgcc ggggcctccg  
840  
cactctgtc atgctttgcc cagggaatca tgactgtc atgctgcaag tcaggcagcg  
900  
actcagagga agcccgggac caaattgtgt ctgcctcgag cggcctctgt tagaggaaga  
960  
agcatccctg gggctgcgga gaagcccaag aaagagattc cagctagtcc ttccaggaca  
1020  
aaaatcccag ctgagaagga atcccaccgg gatgtttctc ctgacaaacc tgccccgggt  
1080  
gctgtcaatg tgccggccgc cggaagccac ttgggccagg gcaagcgggc gatccctgtt  
1140  
ccaaacaagt tggggctgaa gaagaccctg ttaaaagcac ccggtctctac cagcaatctc  
1200  
gcaaggaagt cctcctcggt gctgttttgg agcggggcat ccagtgcgtg cacatcccca  
1260  
gcagtgggca aagctaaatc aagtgaattt gcaagtattc ctgcaaatac cttccggcct  
1320  
ctgtcaaaca tcagcaagtc aggcagaatg ggaccgcga tgctgcggcc agctctgcct  
1380  
gcaggccctg tgggggcata ctcctggcag gccaaagcgg tcgatgtttc tgagtggca  
1440  
gcggagcagc tcacggcacc cccctcagca tccccaccc aacccagac tccggaaggt  
1500  
ggcggccagt ggctgaactc cagttgcgtt tggtcagaat cttctcaatt gaataagact  
1560  
agaagtatca gacggcgaga ttctgtcta aattccaaga caaaggttat gcctactcct  
1620  
acaaatcaat ttaaaattcc taagttttct attggtgact ccccgacag ctcaacacca  
1680  
aagctttcgc gggcacagcg gccgcagtcg tgacgtcag ttggcagggc cactgtccac  
1740  
agcaccgccg ttagacgtc atctgggcca gcaccacaaa gctgtctgag cgcattggct  
1800  
gtgtcagcct tgcccacacc cgcagcccg cgctgctctg gccttcacc gatgacccc  
1860  
aaaacgatgc ccagggcctt gggctctccc ctgtgtgtgc cagctcggag acgttctct  
1920  
gagccccga agaactctgc aatgagaact gaaccaacaa gggagagcaa cagaaagaca  
1980  
gattccagc tgggtgatgt gtccctgac aggggttctc ctccttccc tgtgcctcag  
2040  
gcacttaact tttctccaga ggaaagcgt tctactttct ccaaagtac tgccacagaa  
2100  
gtagctcggg aggaagccaa gccgggtgga gatgcagccc ctagtgaggc tcttcttgta  
2160  
gatatcaaac tggaaccact cgggtcact ccagatgtg caagccagcc cctcattgac  
2220  
cttctctca tcgacttctg cgatacccca gaagcacag tggctgtagg atctgaaagc  
2280

aggcctctga tcgacctcat gacaaacact ccagacatga ataaaaatgt ggccaaacct  
 2340  
 tcaccgggtgg tgggacagct catagacctg agtccccctc tgatccagct gagccctgag  
 2400  
 gctgacaagg agaactgga ttccccactc ctcaagttct aagccgaacc aaatcctttg  
 2460  
 ccttgaaaga acagccctaa agtgggtttc aaccctcaga aacaagcttt aggctggctg  
 2520  
 cagtggctta cacttgtaac cctagaactt gggaggctga ggtggcgga ttacttgagc  
 2580  
 ccaggagtgc gggaccagcc tgggaaatat agtgaaactc ctgtccctac aaaaaatata  
 2640  
 aaaattagcc ggggtgtgta gtgcatgcct gtagtcccag ctacttgga ggctgaagt  
 2700  
 ggaggatggc ctgagctcaa ggagatgcag gctgcagtgg gctgtgattg tgccactgca  
 2760  
 ctccagcctg ggcaccaatg tgagaacctg tcttggaata aaaaaaaag aaacatgttt  
 2820  
 tagtagaagt tttatttgaa aaagaaaaat aagcataaat atattcccag tgctggagag  
 2880  
 ggtgggctga gggactgggg ccagcacgga ccaccaagg cctctgcttc ccgcccac  
 2940  
 cctcctcgct gccattctct gggctggaat gtgaagcctc agtcactcta aatgaagaat  
 3000  
 tttcttttga atgttttgta tgtaaaatag caagtggcta tttttaagt taagtttgta  
 3060  
 taaatagtta gatattctag atttacatta aattgtaaaa taaatggact tattgaagca  
 3120  
 tatcttgatt ttttaagctta tcttgatttt caaacatgca tagctatttt tatcactcta  
 3180  
 atcagtaagg ctactatcta gactcgaatg ctttcataca agtgattttc aaaaattagt  
 3240  
 caatataaat tgatgtcagt gcaggcccg cccgccccca gatacactag tt  
 3292

&lt;210&gt; 5822

&lt;211&gt; 712

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5822

Ile	Leu	Leu	Leu	Ala	Asp	Glu	Lys	Phe	Asp	Phe	Asp	Leu	Ser	Leu	Ser
1				5				10						15	
Ser	Ser	Ser	Ala	Asn	Glu	Asp	Asp	Glu	Val	Phe	Phe	Gly	Pro	Phe	Gly
			20					25					30		
His	Lys	Glu	Arg	Cys	Ile	Ala	Ala	Ser	Leu	Glu	Leu	Asn	Asn	Pro	Val
		35					40					45			
Pro	Glu	Gln	Pro	Pro	Leu	Pro	Thr	Ser	Glu	Ser	Pro	Phe	Ala	Trp	Ser
		50				55					60				
Pro	Leu	Ala	Gly	Glu	Lys	Phe	Val	Glu	Val	Tyr	Lys	Glu	Ala	His	Leu
65					70					75				80	
Leu	Ala	Leu	His	Ile	Glu	Ser	Ser	Ser	Arg	Asn	Gln	Ala	Ala	Gln	Ala
			85					90						95	
Ala	Lys	Pro	Glu	Asp	Pro	Arg	Ser	Gln	Gly	Val	Glu	Arg	Phe	Ile	Gln

100 105 110  
 Glu Ser Lys Leu Lys Ile Asn Leu Phe Glu Lys Glu Lys Glu Met Lys  
 115 120 125  
 Lys Ser Pro Thr Ser Leu Lys Arg Glu Thr Tyr Tyr Leu Ser Asp Ser  
 130 135 140  
 Pro Leu Leu Gly Pro Pro Val Gly Glu Pro Arg Leu Leu Ala Ser Ser  
 145 150 155 160  
 Pro Ala Leu Pro Ser Ser Gly Ala Gln Ala Arg Leu Thr Arg Ala Pro  
 165 170 175  
 Gly Pro Pro His Ser Ala His Ala Leu Pro Arg Glu Ser Cys Thr Ala  
 180 185 190  
 His Ala Ala Ser Gln Ala Ala Thr Gln Arg Lys Pro Gly Thr Lys Leu  
 195 200 205  
 Leu Leu Pro Arg Ala Ala Ser Val Arg Gly Arg Ser Ile Pro Gly Ala  
 210 215 220  
 Ala Glu Lys Pro Lys Lys Glu Ile Pro Ala Ser Pro Ser Arg Thr Lys  
 225 230 235 240  
 Ile Pro Ala Glu Lys Glu Ser His Arg Asp Val Leu Pro Asp Lys Pro  
 245 250 255  
 Ala Pro Gly Ala Val Asn Val Pro Ala Ala Gly Ser His Leu Gly Gln  
 260 265 270  
 Gly Lys Arg Ala Ile Pro Val Pro Asn Lys Leu Gly Leu Lys Lys Thr  
 275 280 285  
 Leu Leu Lys Ala Pro Gly Ser Thr Ser Asn Leu Ala Arg Lys Ser Ser  
 290 295 300  
 Ser Gly Pro Val Trp Ser Gly Ala Ser Ser Ala Cys Thr Ser Pro Ala  
 305 310 315 320  
 Val Gly Lys Ala Lys Ser Ser Glu Phe Ala Ser Ile Pro Ala Asn Ser  
 325 330 335  
 Ser Arg Pro Leu Ser Asn Ile Ser Lys Ser Gly Arg Met Gly Pro Ala  
 340 345 350  
 Met Leu Arg Pro Ala Leu Pro Ala Gly Pro Val Gly Ala Ser Ser Trp  
 355 360 365  
 Gln Ala Lys Arg Val Asp Val Ser Glu Leu Ala Ala Glu Gln Leu Thr  
 370 375 380  
 Ala Pro Pro Ser Ala Ser Pro Thr Gln Pro Gln Thr Pro Glu Gly Gly  
 385 390 395 400  
 Gly Gln Trp Leu Asn Ser Ser Cys Ala Trp Ser Glu Ser Ser Gln Leu  
 405 410 415  
 Asn Lys Thr Arg Ser Ile Arg Arg Arg Asp Ser Cys Leu Asn Ser Lys  
 420 425 430  
 Thr Lys Val Met Pro Thr Pro Thr Asn Gln Phe Lys Ile Pro Lys Phe  
 435 440 445  
 Ser Ile Gly Asp Ser Pro Asp Ser Ser Thr Pro Lys Leu Ser Arg Ala  
 450 455 460  
 Gln Arg Pro Gln Ser Cys Thr Ser Val Gly Arg Val Thr Val His Ser  
 465 470 475 480  
 Thr Pro Val Arg Arg Ser Ser Gly Pro Ala Pro Gln Ser Leu Leu Ser  
 485 490 495  
 Ala Trp Arg Val Ser Ala Leu Pro Thr Pro Ala Ser Arg Cys Ser  
 500 505 510  
 Gly Leu Pro Pro Met Thr Pro Lys Thr Met Pro Arg Ala Val Gly Ser  
 515 520 525  
 Pro Leu Cys Val Pro Ala Arg Arg Arg Ser Ser Glu Pro Arg Lys Asn

530	535	540
Ser Ala Met Arg Thr Glu Pro Thr Arg Glu Ser Asn Arg Lys Thr Asp		
545	550	555
Ser Arg Leu Val Asp Val Ser Pro Asp Arg Gly Ser Pro Pro Ser Arg		
	565	570
Val Pro Gln Ala Leu Asn Phe Ser Pro Glu Glu Ser Asp Ser Thr Phe		
	580	585
Ser Lys Ser Thr Ala Thr Glu Val Ala Arg Glu Glu Ala Lys Pro Gly		
	595	600
Gly Asp Ala Ala Pro Ser Glu Ala Leu Leu Val Asp Ile Lys Leu Glu		
	610	615
Pro Leu Ala Val Thr Pro Asp Ala Ala Ser Gln Pro Leu Ile Asp Leu		
625	630	635
Pro Leu Ile Asp Phe Cys Asp Thr Pro Glu Ala His Val Ala Val Gly		
	645	650
Ser Glu Ser Arg Pro Leu Ile Asp Leu Met Thr Asn Thr Pro Asp Met		
	660	665
Asn Lys Asn Val Ala Lys Pro Ser Pro Val Val Gly Gln Leu Ile Asp		
	675	680
Leu Ser Ser Pro Leu Ile Gln Leu Ser Pro Glu Ala Asp Lys Glu Asn		
	690	695
Val Asp Ser Pro Leu Leu Lys Phe		700
705	710	

&lt;210&gt; 5823

&lt;211&gt; 2585

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5823

```

nggggtttctc caaaaagtgt gttagtcccc ggtcacctga gctccgggtg acgcggtctg
60
ggtagctgcg gatacaagcc ttccgcggtt cctgcctggc gaccccgacc tctcctgct
120
gtctctccgc tccgccacc cgaaccgcc aaggtcctgt ccttttctc ctgtcctttg
180
ccagcgttgg gccggaccgg gccgagccgg gccgcccggg cgcagtcttt aacctggcg
240
tccctcttca agaagaaaac cgtggatgat gtaataaagg aacagaatcg agagttacga
300
ggtacacaga gggctataat cagagatcga gcagctttag agaaacaaga aaaacagctg
360
gaattagaaa ttaagaaaat ggccaagatt ggtaataagg aagcttgcaa agttttagcc
420
aaacaacttg tgcattctacg gaaacagaag acgagaactt ttgctgtaag ttcaaaagtt
480
acttctatgt ctacacaaac aaaagtgatg aattcccaaa tgaagatggc tggagcaatg
540
tctaccacag caaaaacaat gcaggcagtt aacaagaaga tggatccaca aaagacatta
600
caaacaatgc agaatttcca gaaggaaaac atgaaaatgg aatgactga agaatgatc
660
aatgatacac ttgatgacat ctttgacggt tctgatgacg aagaagaaag ccaggatatt
720

```

gtgaatcaag ttcttgatga aattggaatt gaaatttctg gaaagatggc caaagctcca  
780  
tcagctgctc gaagcttacc atctgectct acttcaaagg ctacaatctc agatgaagag  
840  
attgaacggc aactcaaggc tttaggagta gattagtcaa aagaagtcac actattttgc  
900  
ttacttataa ttatgtagta taaaccaagc acagtgcaga tttcttttac aaaacacatg  
960  
tattttgcaa aaaaaaaaa atggagacca tgagtgaaca gttgtttcct aacctatggc  
1020  
tatttagaat cttttgcaa agaatacaca tgatgcaaaa atgggaacag tttggatttt  
1080  
aattagaact gtttatgagt gatgatgtgt aaaaagttga cttctctttt gcatggcaca  
1140  
gagaaattat attccttact tcatgtcagt ttatgttcta aatctttttc actgaatata  
1200  
aaaatcttgt taaatgccat taggcaccaa cttaaagagg gttgtaaaaa tattaaaagt  
1260  
atategttaa ttctgtatct gttgcttgct ttttgtaagt gattatgtgt tatgaccata  
1320  
ggtggttaca gctgcaaat tttttttaa tggtcaaaaa gaagagtgtc atttaaact  
1380  
ctgtcttaaa caaaaactgt cataactttt cttttttttt tttccattag gagaacatc  
1440  
tagttgtaa atttcaaat gtgcttgaca cctgccttaa atagcacaga cctattgtgc  
1500  
acatctttta attatttcag ctggcagaaa agaattacat ttaaaactga aatcaaggcc  
1560  
tcaatacaaa gattatcctg gctcttttct atctctgtgg gcctaattga aatatgtact  
1620  
cttatttttag acacgcctct gttaaaacag gtgttttaac atgttaaaac agaccaggtt  
1680  
ttcctgggtc cagacctatg atgacttgct cctttgatgt cactactgtg aattgaatat  
1740  
aattagtaaa aatagacgat gaataaataa cactttatag taagaaaaca atatattttg  
1800  
gccatctaaa aatgagaatt ataattatat gaattataat ttaaactgtt taattttgtt  
1860  
taatgtgtat attgaatctt ccaaattgaa gccattatc tcaattaagt actacaacta  
1920  
tgacaatgct tgacctacat ttctaaaata aaaattcaca ttttttgata aataaactac  
1980  
agttttacca gaaattacta tctaaatgtg tattagcagt attttttaag gtgaaattgc  
2040  
cttggtatct aatgaatgtg tagacagga gataaaatga aggattgcca gactagttag  
2100  
aatagaattt aggattaggt tagttttgaa aatgatgtt gtaatatatg ggttctaaca  
2160  
catcctacca taaaaactgg aggagatatg tgtaacctgg ttaatttggg atggtggaca  
2220  
ttttgggcta atactgaca aatacatctt aggactagta tacatgtgac acggattgtc  
2280  
aggaggaatg aaaaactaaa ctgtatagtt tatattccgt aaaccatttt ataattgtca  
2340



aagattaggt tttgttattg atagtattaa atacacagtt tctcttaaca gtgatgggtg  
 2400  
 aaaacatttt accggattat ggaatgttta ccagaacatg ttttgattct tgaatgtaca  
 2460  
 taataatgcc atctaactta tttacgttct tgtttacatg tgggagcttt tgttttcaaa  
 2520  
 aattattttg ttaaaaaatc tcaataaaga tttattattg ttgttctttt ctaaaaaaaaa  
 2580  
 aaaaa  
 2585

<210> 5824  
 <211> 213  
 <212> PRT  
 <213> Homo sapiens

<400> 5824  
 Met Ala Ser Leu Phe Lys Lys Lys Thr Val Asp Asp Val Ile Lys Glu  
 1 5 10 15  
 Gln Asn Arg Glu Leu Arg Gly Thr Gln Arg Ala Ile Ile Arg Asp Arg  
 20 25 30  
 Ala Ala Leu Glu Lys Gln Glu Lys Gln Leu Glu Leu Glu Ile Lys Lys  
 35 40 45  
 Met Ala Lys Ile Gly Asn Lys Glu Ala Cys Lys Val Leu Ala Lys Gln  
 50 55 60  
 Leu Val His Leu Arg Lys Gln Lys Thr Arg Thr Phe Ala Val Ser Ser  
 65 70 75 80  
 Lys Val Thr Ser Met Ser Thr Gln Thr Lys Val Met Asn Ser Gln Met  
 85 90 95  
 Lys Met Ala Gly Ala Met Ser Thr Thr Ala Lys Thr Met Gln Ala Val  
 100 105 110  
 Asn Lys Lys Met Asp Pro Gln Lys Thr Leu Gln Thr Met Gln Asn Phe  
 115 120 125  
 Gln Lys Glu Asn Met Lys Met Glu Met Thr Glu Glu Met Ile Asn Asp  
 130 135 140  
 Thr Leu Asp Asp Ile Phe Asp Gly Ser Asp Asp Glu Glu Glu Ser Gln  
 145 150 155 160  
 Asp Ile Val Asn Gln Val Leu Asp Glu Ile Gly Ile Glu Ile Ser Gly  
 165 170 175  
 Lys Met Ala Lys Ala Pro Ser Ala Ala Arg Ser Leu Pro Ser Ala Ser  
 180 185 190  
 Thr Ser Lys Ala Thr Ile Ser Asp Glu Glu Ile Glu Arg Gln Leu Lys  
 195 200 205  
 Ala Leu Gly Val Asp  
 210

<210> 5825  
 <211> 1940  
 <212> DNA  
 <213> Homo sapiens

<400> 5825  
 ctccgacgat ctctcagtga aggacgtcct taatgaggcc acttagcaca gtcaaggtag  
 60

aaatacagac caaatgtcac ctctctgttc tgtcattctt ttatcactca gcagacagct  
120  
agtctgggcc aggtctctacg ctggaacgag ggacacagga atgagggatt tttcccacc  
180  
cccaggaagc acataggcac acagtctgtg cctccttagc actgtggcct ctgggttctc  
240  
atcagggcca gcaacctcac ctgcctcac ctgtccgtcc ttagaagggc attgttacac  
300  
tctgaaaagc aacggtcttc aggttcttcc tttctggatt actaagatct tgattttgat  
360  
gtgtttcagc tggaaagggc taccctgca aaacatgtaa gatagtgtg aactccatag  
420  
aacagtacca agctcatgtc agcggttca aacacaagaa ccagtcacca aaaacagtgg  
480  
catcatcctt gggccagatt ccaatgcaaa ggcaacctat tcagaaagac tcaaccacct  
540  
tggaagacta gaggtgatcc tgcccagcat cccatattgg gccagccatg agccagcttc  
600  
ccgtgactgc tcagcccttg gctcctctt gctcgttgtt ctcaccagga aagtacacgg  
660  
gcctgaggca ggattgggcc acagacagcc tctcattggt ccgggctaatt tcaactctgc  
720  
tgctccccct tggcaggggt cctgtaggtc atgacagggg aggcaagggt attgagagac  
780  
tcggggcttc gcgggggtgt agtttgagg gtggctttcc ccatttccca acccctctgg  
840  
gccttaggtg ctgaggcccc tgccacctgt ctttctcta aaggtcagtt ttgggccagt  
900  
tcttgcaact aaagagcaga gatctctctg ggccctagac atttccagca aaacctggaa  
960  
ctttcatgcc aaacctgggg cagggcagga aacagaggaa atggctgcaa catgggagct  
1020  
tggagctaatt acgacactct gccttcccc agaagggtgca ggctttctg agtcttagac  
1080  
cagatatggc cagttgcgca ggtttctgcc aactgtgaag tctcctctg gagcagtgc  
1140  
acaatcttgg cggagcattg ctacccccgc tgccccctcc acagttctg aatggtgcta  
1200  
aggatctgca gcagttggca acgagctggg gctggggcg gcctccatgt ccaactgagat  
1260  
cataggacac tccaatgggg atgggacctt tccccctct catcagaggt gctctgacct  
1320  
taggttacac gggaaagtgc cccacatgca agtctccctg agggttctgc ccctaaaggc  
1380  
agactgcctc atgcccgtca gctgtgaggt tcattgttac cctcgccct actagccctc  
1440  
tcttccccct tgtgcagcgg accacttgc cagtttctg tgggtctagc cttccccatc  
1500  
atccaccggg tgatttctgg gtcccaggga aagaaagaga gagctgatgc aggtttctac  
1560  
agtgaggaa aggcgtttcc caggccccac acccagattt ctctatctt gctgtgtttt  
1620  
atggcctggg actgagcca caggataga ttttctctg taaccttgag acgagaatc  
1680

caaggagtgt caccatcaga ggcttctctt cattgtgtca aagaagcccc tagctgtctt  
 1740  
 cgtggcctcc ttccccact cctatccct tcacctgtga aatgccttg ctttgcata  
 1800  
 tgtgtgtgga tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tatgtgtgtg cttctgtgtg  
 1860  
 tgcctaatgc tctgtctctt ggctactgaa gcacccaaat aaagaatttc cctcatgggc  
 1920  
 cagactaaaa aaaaaaaaaa  
 1940

<210> 5826

<211> 88

<212> PRT

<213> Homo sapiens

<400> 5826

Val	His	Thr	Asp	Arg	Phe	Phe	Leu	Val	Thr	Leu	Arg	Arg	Glu	Phe	Gln
1				5					10				15		
Gly	Val	Ser	Pro	Ser	Glu	Ala	Ser	Leu	His	Cys	Val	Lys	Glu	Ala	Pro
			20					25				30			
Ser	Cys	Ser	Arg	Gly	Leu	Leu	Pro	Pro	Leu	Pro	Ile	Pro	Ser	Pro	Val
			35				40				45				
Lys	Cys	Leu	Cys	Phe	Ala	Tyr	Cys	Val	Trp	Met	Cys	Val	Cys	Val	Cys
	50					55				60					
Val	Cys	Val	Cys	Val	Cys	Val	Cys	Phe	Cys	Val	Cys	Leu	Met	Leu	Cys
65				70					75					80	
Leu	Leu	Val	Thr	Glu	Ala	Ser	Lys								
							85								

<210> 5827

<211> 428

<212> DNA

<213> Homo sapiens

<400> 5827

ttttaggcaa cacttcgtat gttttaagag ctaaagcaac taagaacaca gtactgtgac  
 60  
 ccacactaag gaatccaggg aagagaagca ttgccttagg ggccacagca agccagagag  
 120  
 tccagattaa aagctccagc ttgggggcct gtttcaaag accaggtagg ttcagccacc  
 180  
 ccctggagac tcgaatagga agaatactga gatacaacat ttgggagaga gatgagaaa  
 240  
 aagcccagct ttataaagag ggggcgttcc cagtactta atctatgcct ggcccagaaa  
 300  
 aggtgaaaac atgaggtggg ggacatgaaa attgttaaact aaagtgaact gtgcagtaag  
 360  
 aatgagttgg gcgaggtgca ccagcagagg ggaggcaggt aggaaggagg aggcagatg  
 420  
 aggggggag  
 428

<210> 5828

<211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 5828  
 Met Pro Pro Pro Ser Tyr Leu Pro Pro Leu Cys Trp Cys Thr Ser Pro  
 1 5 10 15  
 Asn Ser Phe Leu Leu His Ser Ser Leu Tyr Leu Thr Ile Phe Met Ser  
 20 25 30  
 Pro Thr Ser Cys Phe His Leu Phe Trp Ala Arg His Arg Leu Ser Asn  
 35 40 45  
 Trp Glu Arg Pro Leu Phe Ile Lys Leu Gly Phe Phe Leu Ile Ser Leu  
 50 55 60  
 Pro Asn Val Val Ser Gln Tyr Ser Ser Tyr Ser Ser Leu Gln Gly Val  
 65 70 75 80  
 Ala Glu Pro Thr Trp Ser Phe Glu Thr Gly Pro Gln Ala Gly Ala Phe  
 85 90 95  
 Asn Leu Asp Ser Leu Ala Cys Cys Asp Pro  
 100 105

<210> 5829  
 <211> 5747  
 <212> DNA  
 <213> Homo sapiens

<400> 5829  
 nnggcacgag cggaggagga cgcgagcccc ttgcgggcgg tcatcacagc ccagcctcgg  
 60  
 ggctgccaca gcgcgttgcg cctgtgcgcc ctccgtcccc gcgtccactg agcgccgcgc  
 120  
 tcggggatgg ggccccggcg gccggccccc gcgccttgcc ctgctcacct gctgcgtgc  
 180  
 gtctgtctcc tcgggtgcct gcacctcgcc cgtccccggc cccctgggga cgcgcctc  
 240  
 ccggaaccca acgtcttct catcttcagc catggactgc agggctgcct ggaggccag  
 300  
 ggcgggcagg tcagagtcac cccggcttgc aataccagcc tccctgccc ggcgtgga  
 360  
 tgggtctccc gaaaccggct attcaacctg ggtaccatgc agtgcttggg cacaggctgg  
 420  
 ccaggcacca acaccacggc ctccctgggc atgtatgagt gtgaccggga agcactgaat  
 480  
 ctctcgtggc attgtcgtac actgggtgac cagctgtcct tgcctcggg ggccccgacc  
 540  
 agcaacatat ccaagcctgg cacccttgag cgtggtgacc agaccgcag tggccagtgg  
 600  
 cgcctctacg gcagcgagga ggacctatgt gctctgcct accacgaggt ctacaccatc  
 660  
 cagggaaact cccacggaaa gccgtgcacc atccccctca aatatgacaa ccagtgggtc  
 720  
 cagggtgca ccagcacggg ccgcgaggat ggtcacctgt ggtgtgccac caccaggac  
 780  
 tacggcaaag acgagcgtg gggcttctgc cccatcaaga gtaacgactg cgagaccttc  
 840

tgggacaagg accagctgac tgacagctgc taccagttta acttccagtc cacgctgtcg  
900  
tggagggagg cctgggccag ctgcgagcag caggggtgcg atctgctgag catcacggag  
960  
atccacgagc agacctacat caacggcctc ctactgggt acagctccac cctgtggatc  
1020  
ggcttgaatg acttggacac gagcggaggc tggcagtggc cggacaactc gccctcaag  
1080  
tacctcaact gggagagtga ccagccggac aaccccagtg aggagaactg tggagtgate  
1140  
cgactgagt cctcgggcgg ctggcagaac cgtgactgca gcacgcgct gccctatgtg  
1200  
tgcaagaaga agcccaacgc cacggccgag cccaccctc cagacagggtg ggccaatgtg  
1260  
aagggtgagt gcgagccgag ctggcagccc ttccagggcc actgetaccg cctgcaggcc  
1320  
gagaagcgca gctggcagga gtccaagaag gcatgtctac ggggcgggtg cgacctggtc  
1380  
agcatccaca gcatggcgga gctggaattc atcaccaagc agatcaagca agagggtggag  
1440  
gagctgtgga tcggcctcaa cgatttgaaa ctgcagatga attttgagtg gtctgacggg  
1500  
agccttgtga gcttcaccca ctggcacccc tttagacca acaacttccg ggacagtctg  
1560  
gaggactgtg tcaccatctg gggcccggaa ggccgctgga acgacagtcc ctgtaaccag  
1620  
tccttgccat ccatctgcaa gaaggcaggc cagctgagcc agggggccgc cgaggaggac  
1680  
catggctgcc ggaaggggtg gacgtggcac agccatcct gctactggct gggagaagac  
1740  
caagtgaact acagtgaggc ccggcgctg tgcactgacc atggctctca gctggtcacc  
1800  
atcaccaaca ggttcgagca ggccttcgtc agcagcctca tctacaactg ggagggcgag  
1860  
tacttctgga cggcctgca ggacctcaac agcaccggct ccttctctg gctcagtggg  
1920  
gatgaagtca tgtacacca ctggaaccgg gaccagccc ggtacagccg tgggggctgc  
1980  
gtggcgctgg cactggcag cgccatgggg ctgtgggagg tgaagaactg tacctcgttc  
2040  
cgggcccgt acatctgccg gcagagcctg ggcactccag tgacgccgga gctgccggg  
2100  
ccagatccca cggccagcct cactggctcc tgtecccagg gctgggcctc ggacaccaa  
2160  
ctccggtatt gctataaggt gttcagctca gagcggctgc aggacaagaa gagctgggtc  
2220  
caggcccagg gggcctgcca ggagctgggg gccagctgc tgagcctggc cagctacgag  
2280  
gaggagcact ttgtggccaa catgctcaac aagatcttcg gtgaatcaga acccgagatc  
2340  
cacgagcagc actggttctg gatcggcctg aaccgtcggg atcccagagg gggtcagagt  
2400  
tggcgctgga gcgacggcgt agggttctct taccacaatt tcgaccggag ccggcacgac  
2460

gacgacgaca tccgaggctg tgcggtgctg gacctggcct cctgcagtg ggtggccatg  
2520  
cagtgcgaca cacagctgga ctggatctgc aagatcccca gaggtacgga cgtgcgggag  
2580  
cccgacgaca gccctcaagg ccgacgggaa tggctgcgct tccaggaggc cgagtacaag  
2640  
ttctttgagc accactccac gtgggcgag ggcagcgca tctgcacgtg gttccaggcc  
2700  
gagctgacct ccgtgcacag ccaggcggag ctagacttcc tgagccacaa cttgcagaag  
2760  
ttctccggg cccaggagca gcactggtg atcggcctgc acacctetga gagcgatggg  
2820  
cgcttcagat ggacagatgg ttccattata aacttcatct cctgggcacc aggcaaacct  
2880  
cggcctgtcg gcaaggacaa gaagtgcgtg tacatgacag ccagccgaga ggactggggg  
2940  
gaccagaggt gcctgacagc cttgccctac atctgcaagc gcagcaacgt caccaaagaa  
3000  
acgcagcccc cagacctgcc aactacagcc ctggggggct gccctctga ctggatccag  
3060  
ttctcaaca agtgttttca ggtccagggc caggaacccc agagccgggt gaagtggtea  
3120  
gaggcacagt tctcctgtga acagcaagag gccagctgg tcaccatcac aaacccctta  
3180  
gagcaagcat tcacacagc cagcctgcc aatgtgacct ttgacctttg gattggcctc  
3240  
catgcctcgc agagggactt ccagtgggtg gagcaggagc cttgatgta tgccaactgg  
3300  
gcacctgggg agcctctggt ccctagccct gctcccagtg gcaacaaacc gaccagctgt  
3360  
gcggtgggtc tgcacagccc ctcagccac ttcactggcc gctgggacga tcggagctgc  
3420  
acggaggaga cccatggctt catctgccag aagggcacgg accctccct gagccgtcc  
3480  
ccagcagcgc tgccccccgc cccgggcact gagctctcct acctcaacgg caccttccgg  
3540  
ctgcttcaga agccgctgcg ctggcacgat gccctcctgc tgtgtgagag ccacaatgcc  
3600  
agcctggcct acgtgcccga cccctacacc caggccttcc tcacgcaggc tgcccagggg  
3660  
ctgcgcacgc cgctctggat tgggctggct ggcgaggagg gctctcggcg gtactcctgg  
3720  
gtctcagagg agccgctgaa ctacgtgggc tggcaggacg gggagccgca gcagccgggg  
3780  
ggctgtacct acgtagatgt ggacggggcc tggcgacca ccagctgtga caccaagctg  
3840  
cagggggctg tgtgtggggg tagcagtggg cccctcctc cccgaagaat aagctaccat  
3900  
ggcagctgtc cccagggact ggcagactcc gcgtggattc ccttcggga gcactgctat  
3960  
tctttccaca tggagctgct gctgggccac aaggaggcgc gacagcgctg ccagagagcg  
4020  
ggtggggccg tcctgtctat cctggatgag atggagaatg tgtttgtctg ggagcacctg  
4080

cagagctatg agggccagag tcggggcgcc tggetgggca tgaacttcaa ccccaaagga  
4140  
ggcactctgg tctggcagga caacacagct gtgaactact ccaactgggg gcccccgggc  
4200  
ttggggccca gcatgctgag ccacaacagc tgctactgga ttcagagcaa cagcgggcta  
4260  
tggcgccccg gcgcttgcaac caacatcacc atgggtgtcg tctgcaagct tcctcgtgct  
4320  
gagcagagca gcttctcccc atcagcgctt ccagagaacc cagcggccct ggtgggtggtg  
4380  
ctgatggcgg tgctgctgct cctggccttg ctgaccgcag ccctcatcct ttaccggagg  
4440  
cgccagagca tcgagcgagg ggcctttgag ggtgcccgt acagccgcag cagctccagc  
4500  
cccaccgagg ccaactgagaa gaacatcctg gtgtcagaca tggaaatgaa tgagcagcaa  
4560  
gaatagagcc aggcgcgtgg gcagggccag ggcgggagga gctggggagc tggggccctg  
4620  
ggtcagtctg gccccccacc agctgcctgt ccagttggcc tattgaaggg tgcccttggg  
4680  
agtcgctgtt gggagccgga gctgggcaga gcctgggctg gtggggtgcc accctccac  
4740  
aagggtctgg ctgagacca gcaaagagca gcgtggcggt tcctttctg ggggggctg  
4800  
aggtcttgtc acctggtcct gtgccccac aggaaccaga ggtaggatgg gagggggaac  
4860  
gagagcctct ttctccccag agccccggc ccaggcctgt tgatccgcgc ccaggacc  
4920  
ccttctttgc agagcccgag gaggctcccc tgctccctcg ggcagatctg ttgtgtctct  
4980  
cttccacact ggcagcctca gctctgtgcc cctcaccctg ctccctctcg ccccttctct  
5040  
cccacccctt ccttctgagc cgggccttg ggattgggga gccctcttgt tcctgatgag  
5100  
ggtcagctga gggggctgag catccatcac tcctgtgcct gctgggggtg ctgtggggcg  
5160  
tggcaggagg ggcctaggtg ggttgggcct gagaaccagg gcacgggtgt ggtgtctgct  
5220  
gggtgggaga taagactggg gagagacacc ccaacctccc aggggtgggag ctgggccggg  
5280  
ctgggatgtc atctcctgcc gggcggggga gggctctgcc cctggaagag tccctgtgg  
5340  
ggacccaaat aagttcccta acatctccag ctctggctc tggtttgag caaggggaag  
5400  
ggttgccaga gtctggggg cccagagga gcaggagtct gggagggcc agagttcacc  
5460  
ctctagtgga tccaggagga gcagcaccgc agcctggag tggccagta ccctccaag  
5520  
aggccacagt cccagccagg acaaagtatg cggcccatcc tgggtgcgaca gcgtgggaca  
5580  
atgtgaacat ggactcgaag acatggccct ttctctgtag ttgatttttt aaatgtgcca  
5640  
ttattgtttt taaaaaaaaa ggaaaaaaga aaagcaaaca aataaaacac ctttaagagg  
5700

cttgaaagaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa  
5747

<210> 5830

<211> 1479

<212> PRT

<213> Homo sapiens

<400> 5830

Met	Gly	Pro	Gly	Arg	Pro	Ala	Pro	Ala	Pro	Trp	Pro	Arg	His	Leu	Leu
1				5					10					15	
Arg	Cys	Val	Leu	Leu	Leu	Gly	Cys	Leu	His	Leu	Gly	Arg	Pro	Gly	Ala
		20						25					30		
Pro	Gly	Asp	Ala	Ala	Leu	Pro	Glu	Pro	Asn	Val	Phe	Leu	Ile	Phe	Ser
		35					40					45			
His	Gly	Leu	Gln	Gly	Cys	Leu	Glu	Ala	Gln	Gly	Gly	Gln	Val	Arg	Val
	50					55					60				
Thr	Pro	Ala	Cys	Asn	Thr	Ser	Leu	Pro	Ala	Gln	Arg	Trp	Lys	Trp	Val
65					70					75				80	
Ser	Arg	Asn	Arg	Leu	Phe	Asn	Leu	Gly	Thr	Met	Gln	Cys	Leu	Gly	Thr
			85						90					95	
Gly	Trp	Pro	Gly	Thr	Asn	Thr	Thr	Ala	Ser	Leu	Gly	Met	Tyr	Glu	Cys
		100						105					110		
Asp	Arg	Glu	Ala	Leu	Asn	Leu	Arg	Trp	His	Cys	Arg	Thr	Leu	Gly	Asp
		115					120					125			
Gln	Leu	Ser	Leu	Leu	Leu	Gly	Ala	Arg	Thr	Ser	Asn	Ile	Ser	Lys	Pro
	130					135					140				
Gly	Thr	Leu	Glu	Arg	Gly	Asp	Gln	Thr	Arg	Ser	Gly	Gln	Trp	Arg	Ile
145					150					155				160	
Tyr	Gly	Ser	Glu	Glu	Asp	Leu	Cys	Ala	Leu	Pro	Tyr	His	Glu	Val	Tyr
			165						170					175	
Thr	Ile	Gln	Gly	Asn	Ser	His	Gly	Lys	Pro	Cys	Thr	Ile	Pro	Phe	Lys
		180						185					190		
Tyr	Asp	Asn	Gln	Trp	Phe	His	Gly	Cys	Thr	Ser	Thr	Gly	Arg	Glu	Asp
	195						200					205			
Gly	His	Leu	Trp	Cys	Ala	Thr	Thr	Gln	Asp	Tyr	Gly	Lys	Asp	Glu	Arg
	210					215					220				
Trp	Gly	Phe	Cys	Pro	Ile	Lys	Ser	Asn	Asp	Cys	Glu	Thr	Phe	Trp	Asp
225					230					235				240	
Lys	Asp	Gln	Leu	Thr	Asp	Ser	Cys	Tyr	Gln	Phe	Asn	Phe	Gln	Ser	Thr
			245						250				255		
Leu	Ser	Trp	Arg	Glu	Ala	Trp	Ala	Ser	Cys	Glu	Gln	Gln	Gly	Ala	Asp
		260						265					270		
Leu	Leu	Ser	Ile	Thr	Glu	Ile	His	Glu	Gln	Thr	Tyr	Ile	Asn	Gly	Leu
	275						280					285			
Leu	Thr	Gly	Tyr	Ser	Ser	Thr	Leu	Trp	Ile	Gly	Leu	Asn	Asp	Leu	Asp
	290					295					300				
Thr	Ser	Gly	Gly	Trp	Gln	Trp	Ser	Asp	Asn	Ser	Pro	Leu	Lys	Tyr	Leu
305					310					315				320	
Asn	Trp	Glu	Ser	Asp	Gln	Pro	Asp	Asn	Pro	Ser	Glu	Glu	Asn	Cys	Gly
			325						330				335		
Val	Ile	Arg	Thr	Glu	Ser	Ser	Gly	Gly	Trp	Gln	Asn	Arg	Asp	Cys	Ser
		340						345				350			
Ile	Ala	Leu	Pro	Tyr	Val	Cys	Lys	Lys	Lys	Pro	Asn	Ala	Thr	Ala	Glu



355 360 365  
 Pro Thr Pro Pro Asp Arg Trp Ala Asn Val Lys Val Glu Cys Glu Pro  
 370 375 380  
 Ser Trp Gln Pro Phe Gln Gly His Cys Tyr Arg Leu Gln Ala Glu Lys  
 385 390 395 400  
 Arg Ser Trp Gln Glu Ser Lys Lys Ala Cys Leu Arg Gly Gly Gly Asp  
 405 410 415  
 Leu Val Ser Ile His Ser Met Ala Glu Leu Glu Phe Ile Thr Lys Gln  
 420 425 430  
 Ile Lys Gln Glu Val Glu Glu Leu Trp Ile Gly Leu Asn Asp Leu Lys  
 435 440 445  
 Leu Gln Met Asn Phe Glu Trp Ser Asp Gly Ser Leu Val Ser Phe Thr  
 450 455 460  
 His Trp His Pro Phe Glu Pro Asn Asn Phe Arg Asp Ser Leu Glu Asp  
 465 470 475 480  
 Cys Val Thr Ile Trp Gly Pro Glu Gly Arg Trp Asn Asp Ser Pro Cys  
 485 490 495  
 Asn Gln Ser Leu Pro Ser Ile Cys Lys Lys Ala Gly Gln Leu Ser Gln  
 500 505 510  
 Gly Ala Ala Glu Glu Asp His Gly Cys Arg Lys Gly Trp Thr Trp His  
 515 520 525  
 Ser Pro Ser Cys Tyr Trp Leu Gly Glu Asp Gln Val Thr Tyr Ser Glu  
 530 535 540  
 Ala Arg Arg Leu Cys Thr Asp His Gly Ser Gln Leu Val Thr Ile Thr  
 545 550 555 560  
 Asn Arg Phe Glu Gln Ala Phe Val Ser Ser Leu Ile Tyr Asn Trp Glu  
 565 570 575  
 Gly Glu Tyr Phe Trp Thr Ala Leu Gln Asp Leu Asn Ser Thr Gly Ser  
 580 585 590  
 Phe Phe Trp Leu Ser Gly Asp Glu Val Met Tyr Thr His Trp Asn Arg  
 595 600 605  
 Asp Gln Pro Gly Tyr Ser Arg Gly Gly Cys Val Ala Leu Ala Thr Gly  
 610 615 620  
 Ser Ala Met Gly Leu Trp Glu Val Lys Asn Cys Thr Ser Phe Arg Ala  
 625 630 635 640  
 Arg Tyr Ile Cys Arg Gln Ser Leu Gly Thr Pro Val Thr Pro Glu Leu  
 645 650 655  
 Pro Gly Pro Asp Pro Thr Pro Ser Leu Thr Gly Ser Cys Pro Gln Gly  
 660 665 670  
 Trp Ala Ser Asp Thr Lys Leu Arg Tyr Cys Tyr Lys Val Phe Ser Ser  
 675 680 685  
 Glu Arg Leu Gln Asp Lys Lys Ser Trp Val Gln Ala Gln Gly Ala Cys  
 690 695 700  
 Gln Glu Leu Gly Ala Gln Leu Leu Ser Leu Ala Ser Tyr Glu Glu Glu  
 705 710 715 720  
 His Phe Val Ala Asn Met Leu Asn Lys Ile Phe Gly Glu Ser Glu Pro  
 725 730 735  
 Glu Ile His Glu Gln His Trp Phe Trp Ile Gly Leu Asn Arg Arg Asp  
 740 745 750  
 Pro Arg Gly Gly Gln Ser Trp Arg Trp Ser Asp Gly Val Gly Phe Ser  
 755 760 765  
 Tyr His Asn Phe Asp Arg Ser Arg His Asp Asp Asp Ile Arg Gly  
 770 775 780  
 Cys Ala Val Leu Asp Leu Ala Ser Leu Gln Trp Val Ala Met Gln Cys

785                      790                      795                      800  
 Asp Thr Gln Leu Asp Trp Ile Cys Lys Ile Pro Arg Gly Thr Asp Val  
                                  805                      810                      815  
 Arg Glu Pro Asp Asp Ser Pro Gln Gly Arg Arg Glu Trp Leu Arg Phe  
                                  820                      825                      830  
 Gln Glu Ala Glu Tyr Lys Phe Phe Glu His His Ser Thr Trp Ala Gln  
                                  835                      840                      845  
 Ala Gln Arg Ile Cys Thr Trp Phe Gln Ala Glu Leu Thr Ser Val His  
                                  850                      855                      860  
 Ser Gln Ala Glu Leu Asp Phe Leu Ser His Asn Leu Gln Lys Phe Ser  
 865                      870                      875                      880  
 Arg Ala Gln Glu Gln His Trp Trp Ile Gly Leu His Thr Ser Glu Ser  
                                  885                      890                      895  
 Asp Gly Arg Phe Arg Trp Thr Asp Gly Ser Ile Ile Asn Phe Ile Ser  
                                  900                      905                      910  
 Trp Ala Pro Gly Lys Pro Arg Pro Val Gly Lys Asp Lys Lys Cys Val  
                                  915                      920                      925  
 Tyr Met Thr Ala Ser Arg Glu Asp Trp Gly Asp Gln Arg Cys Leu Thr  
                                  930                      935                      940  
 Ala Leu Pro Tyr Ile Cys Lys Arg Ser Asn Val Thr Lys Glu Thr Gln  
 945                      950                      955                      960  
 Pro Pro Asp Leu Pro Thr Thr Ala Leu Gly Gly Cys Pro Ser Asp Trp  
                                  965                      970                      975  
 Ile Gln Phe Leu Asn Lys Cys Phe Gln Val Gln Gly Gln Glu Pro Gln  
                                  980                      985                      990  
 Ser Arg Val Lys Trp Ser Glu Ala Gln Phe Ser Cys Glu Gln Gln Glu  
                                  995                      1000                      1005  
 Ala Gln Leu Val Thr Ile Thr Asn Pro Leu Glu Gln Ala Phe Ile Thr  
                                  1010                      1015                      1020  
 Ala Ser Leu Pro Asn Val Thr Phe Asp Leu Trp Ile Gly Leu His Ala  
 1025                      1030                      1035                      1040  
 Ser Gln Arg Asp Phe Gln Trp Val Glu Gln Glu Pro Leu Met Tyr Ala  
                                  1045                      1050                      1055  
 Asn Trp Ala Pro Gly Glu Pro Ser Gly Pro Ser Pro Ala Pro Ser Gly  
                                  1060                      1065                      1070  
 Asn Lys Pro Thr Ser Cys Ala Val Leu His Ser Pro Ser Ala His  
                                  1075                      1080                      1085  
 Phe Thr Gly Arg Trp Asp Asp Arg Ser Cys Thr Glu Glu Thr His Gly  
                                  1090                      1095                      1100  
 Phe Ile Cys Gln Lys Gly Thr Asp Pro Ser Leu Ser Pro Ser Pro Ala  
 1105                      1110                      1115                      1120  
 Ala Leu Pro Pro Ala Pro Gly Thr Glu Leu Ser Tyr Leu Asn Gly Thr  
                                  1125                      1130                      1135  
 Phe Arg Leu Leu Gln Lys Pro Leu Arg Trp His Asp Ala Leu Leu Leu  
                                  1140                      1145                      1150  
 Cys Glu Ser His Asn Ala Ser Leu Ala Tyr Val Pro Asp Pro Tyr Thr  
                                  1155                      1160                      1165  
 Gln Ala Phe Leu Thr Gln Ala Ala Arg Gly Leu Arg Thr Pro Leu Trp  
                                  1170                      1175                      1180  
 Ile Gly Leu Ala Gly Glu Glu Gly Ser Arg Arg Tyr Ser Trp Val Ser  
 1185                      1190                      1195                      1200  
 Glu Glu Pro Leu Asn Tyr Val Gly Trp Gln Asp Gly Glu Pro Gln Gln  
                                  1205                      1210                      1215  
 Pro Gly Gly Cys Thr Tyr Val Asp Val Asp Gly Ala Trp Arg Thr Thr